LOCAL SOCIETIES in BRONZE AGE NORTHERN EUROPE

Edited by Nils Anfinset
and Melanie Wrigglesworth

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Nils Anfinset and Melanie Wrigglesworth

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Bergen

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Introduction: local societies, regions and processes of cultural interaction in the Bronze Age

Nils Anfinset and Melanie Wrigglesworth

Background

Our departing point for this collection of chapters on the North European Bronze Age has been that our conception of this region is generally framed by two major components. One is the national component, as archaeology *per se* was a significant part of the national awakening in the nineteenth and early twentieth centuries. Obviously this focused on people, land and unity in order to build a common future. The second component is the fact that the central European Bronze Age (CEBA) has over the past decades played an increasing role in our understanding of the Bronze Age in the northern part of Europe as well. This has political and economic reasons due to the initial development (and later the expansion) of the European Union. This was particularly seen through the 1990s with the inclusion of new member states and the focus on the Bronze Age as a pan-European culture, not unlike the earlier national archaeologies focusing on building a common identity based on a common past. In terms of material expressions the CEBA is particularly rich and expressive, quite different from other parts of Europe, which regard these as peripheral.

Now, this may be so, but the fact that we are living in a globalized world has led us to ask questions on these relations: Is the Bronze Age of northern Europe really still a bleak contrast to the CEBA, or are there other factors that may count for both a different understanding of this diverse region and should it possibly be interpreted in different ways? What role do local societies play in general and here in terms of the Bronze Age? Do they have an impact on the greater world, or is it just a one-way influence from south to north? Why is it that the greater part of northern Europe is ignored when trying to understand this greater picture of influences and processes? Rarely is northern Fennoscandia considered, and even less the Russian part of this region. Language and politics may be two reasons for this, but in order to understand this greater picture and the dynamics of both local societies and regional entities we have to engage with this part of northern Europe as well. We do not claim to present the ultimate solution and approaches, but see this as a starting point. In this way we at least wish to move away from national perspectives on archaeological interpretation and theory. This is, of course, to balance on a razor's edge: on the one hand we want to move closer to the wider world; on the other hand we want to understand what is happening with local societies in these greater processes of interaction and change that are so apparent in the Bronze Age.

In other words, it is necessary to understand local societies, how they interact, resist and pick up selected features from other places. The question is also how this fits with our understanding of an area of contact and interaction, and how this is connected to geography, economy and ideology. The region of northern Europe may be regarded as Kristiansen's (2009: 57) concept of Europe, being a large and loosely defined geographical space that is able to open up a wider research perspective. We see northern Europe in this way, and the region has been shrinking and growing depending on the historical forces at play in different periods.

The role of local societies in the greater world

In order to approach the questions being asked, we have asked a number of scholars, at different stages in their academic careers, to consider these issues of the relevance of local societies, identities and responses during the Bronze Age of northern Europe from their perspective. The approaches as well as the conceptualization differ, and we see this as a very useful point of departure for understanding the dynamics of the Bronze Age, giving it a more diverse understanding. We have chosen to divide the book into two main themes, which are central to the chapters and their approach. In this case the chapters are organized thematically according to their main focus or approach. This means that several of the chapters presented here are connected in other ways than their successive setting. The baseline for all the chapters is how local interaction and social change may be applied and understood in connection with global, inter-regional and local processes during the Bronze Age in northern Europe.

We are interested in the local level, how local lives were lived and how the communities adapted to the rest of "their" world. This is not to place an empirical focus on the research only focusing on the local, but rather to place the local into a context, in order to explain transformations and changes, and possibly also why certain features of the society are adopted while others are not. We are not aiming at a theoretical determinism or historical particularism, but rather at a dialectic relationship between the local, regional and inter-regional.

This does not necessarily mean that we accept approaches focusing on macroeconomic systems (such as the world systems theory and the grand narrative approach), or purely the relevance of long-distance travel and exchange. There is no doubt that long-distance travel occurred during the Bronze Age, bringing home new knowledge and ideas (Helms 1988; Kristiansen & Larsson 2005). However, although such ideas and knowledge may have challenged local ideas and conceptions, there is also a "cultural filter" in terms of what is accepted or transformed into the society. Certain ideas are accepted and incorporated, others may be partially incorporated or transformed to fit local ideas and conceptions, while others again are resisted. In the words of Kristiansen (2009: 59), it is exactly these processes of change between the local and the global that are significant.

We have to meet these challenges both theoretically and methodologically. This is not about nationalism, but rather about understanding these relations of the local and the global not only with reference to travels, but also in terms of cultural change and how local elements are transformed and converted to global arenas and vice versa. Encounters create changes and reactions in all directions, not only from the global arena to the local. However, what is interesting is how new ideas, technologies and knowledge are dealt with in local societies. Why is it that the early metal artefacts are often deposited in hoards or ritual contexts? Burials have often, particularly in southern Scandinavia, played a significant role in the reconstruction of the social structure. What happens in the absence of a visible burial tradition? Did social institutions change dramatically on the eve of metal or were they incorporated into already existing systems? Here it is tempting to follow Kristiansen's (2009: 62–3) argument that although there are dramatic changes and social transformations, institutional traditions may remain stable. How should we explain similarities in material culture beyond travel and transmission of knowledge?

In other words, we are not aiming at a local-level understanding alone; rather, the aim is to contextualize the local level of understanding how local societies reacted not only to changes, but how they were part of larger processes, and also what they chose to pick up and what they did not choose to pick up.

Identity, grand narratives and networks

Networks and the grand narrative approach often have an economic content, although Kristiansen and Larson (2005) have suggested that this might change social institutions. Identity becomes important when people meet, in particular when there are cultural meetings of people with different cultural values and different social organization. In Chapter 1, Charlotte Damm raises the complex question of how we should approach the complexity of the past with reference to collective identities in the Early Metal Age of Scandinavia. This is significant as we theoretically use such concepts as heterogeneity, hybridity and creolization in archaeological interpretations. Taking the Sámi population in northern Fennoscandia as a starting point, she points out that there are a number of identities at play in different situations and contexts in a very complex pattern even at a local or micro level, being more diverse than the simple dichotomy of culture dualism – there is much greater diversity in Fennoscandia than simply arguing that the people were hunters and gatherers. There seems to be great regional variation and in the final part of the Late Stone Age there is a change from a fairly sedentary or semi-sedentary adaptation to increased seasonal mobility and more intensive utilization of various ecological zones, probably with an increased emphasis on reindeer hunting.

Sherratt (1999: 20) has argued that exchange can easily occur between contrasting ecologies and ecological zones, and in this case the various ecological zones of northern Europe may have been an important supplement to central Europe, both in terms of identities and networks. Damm here suggests that in order to approach collective identities we therefore have to look at social and cultural practices that may have been active based on a network approach, rather than distribution patterns of selected cultural characteristics. This is important as it allows us to build up a more flexible model on collective identities in the past and the transmission of knowledge in a network, particularly in terms of what Damm defines as vertical learning networks and to a certain degree horizontal learning networks.

Damm and Lars Forsberg partly overlap in time and space, although their approach differs. In Chapter 2, Forsberg discusses the differences between the coastal and inland societies of the Bothnian area during the Epineolithic and the Early Metal Age, starting from a research-historical perspective and arguing that this is necessary with a local focus on societies in order to explain local variation in the archaeological material, as well as larger structural similarities. Forsberg uses concepts of the rough and the smooth in order to explain general features in the archaeological material, as well as deviations and variation from the general features. With profound changes in the archaeological material in the mid-third millennium BCE and onwards, the changes created a mosaic of local societies in the region discussed. Forsberg's chapter is partly linked both thematically and theoretically to the chapters of Maria Yushkova and Mika Lavento (see below), who broaden our picture and understanding of the developments to the east, which must be seen in connection with these changes.

As a contrast to northern Scandinavia, Mette Roesgaard Hansen (Chapter 3) discusses how identity is connected to Early Bronze Age burials from periods II and III within a small local area of Thy in northwest Denmark. She argues that ritual action is a significant element in the production and reproduction of the social structure, using Bourdieu's practice theory as a point of departure. This is further connected to the repeated treatment of the body which creates patterns, reflecting the perception of death and the status of the individual in local society. Local differences may be interpreted not only as unique ritual aspects, but also as a way of expressing interpersonal differences. Roesgaard Hansen argues that it is not sufficient to look at similarities and differences in the material culture; it is just as important to analyse the ritual act connected to these contexts. This suggests that in this case, as argued above, there are different levels of regions, and different networks among men and women. The combination of artefacts, body and grave at Thy point towards different levels of contact on a local, regional and inter-regional level.

What comes out of this is a wider network among ancient societies – a network that is not too different from modern and historical networks and cycles (cf. Braudel 1972, 1995; Castells 1996, 1997, 1998). In this context we might ask why long journeys were undertaken, and why exotic goods such as bronze objects were brought back, as this is not necessarily an exploitation of peripheries by a core area. In particular, similar approaches have been connected to the grand narrative approach in order to explain larger geographic areas with similar cultural phenomena (e.g. Kristiansen & Larsson 2005).

In Chapter 4, Kristin Armstrong Oma raises several crucial questions related to both Bronze Age studies and general issues in archaeology. Her point of departure is that large-scale and small-scale studies rarely include each other. The local tradition is often reflected as being fragmented and isolated, but with solid data, while the grand narrative or the macro-scale generally lacks solid data. Here animals are used to bridge two rather different traditions in order to explain inter-regional contacts from a local perspective, as well as to build a more holistic approach in order to explain connections, similarities and communication. The examples illustrate diversity in the Bronze Age cosmology and conceptualization, but are also a way of understanding local approaches to the inter-regional processes of expressions and contrasts. What is significant here is that such a study also points to the significance of local lives and societies, and it is exactly this bridging of traditions that is necessary in order to improve our understanding of past societies in general. Increased focus on networks and globalization in general has also led to a similar research focus in archaeology and related disciplines on long-term historical processes.

This is particularly seen in the argument of Lene Melheim who argues, in Chapter 5, that it is important to understand access to and the accumulation of metal, and how we define a periphery. Conceptually, there is a close link with how the Bronze Age is interpreted, and metal exchange with central Europe has been regarded as one of the important factors for the development of relations and a network with Europe. Here Melheim points to the paradox that southern Norway is fairly rich in copper ores, while the amount of bronzes from the period is extremely low. She argues for a long local tradition of mining in western Norway that was more significant as an interplay between local and external influences than the evolution of technologies connected to copper production. On the other hand, the inland of Norway is considered a periphery in the Bronze Age, though with evidence of soapstone quarrying from the Late Bronze Age (LBA) well into the pre-Roman Iron Age and later. Melheim points out that most of the prerequisites for bronze or copper production seem to be in place, suggesting that metallurgy was adopted through a Bell Beaker network, as suggested by the evidence at the Skrivarhelleren rock-shelter (see also Chapters 6, 12 and 13).

One of the main aims of these chapters was to provide a basis for understanding the periphery of the European Bronze Age world and how local societies conceptualize the significance of metal in this context. Ørjan Engedal follows up on this in Chapter 6 as the bronzes are few in the northern part of Europe and rare, while the topography is harsh with a shifting climate. He suggests that a particular methodology is needed, especially looking at shorter time spans and situations. He traces the first bronzes found in Norway back to their origin, through byways, and discusses how these may alter our perception of the Bronze Age. He therefore models a journey towards the east, through Sweden, also suggesting that part of eastern Norway would be at the crossing of different networks as several of the bronzes there point towards influence from Denmark. Changes in the Alpine region to control the amber trade to the east indirectly resulted in linking up with the interior of Scandinavia.

In a discussion on ship symbolism in Scandinavia, Skoglund (2009: 214) recently argued that there has been both network and corporate strategies, suggesting that there is a need to focus on the local contexts where particular symbols were used, as this would open up a more fragmented and diverse Bronze Age society. He has suggested that the differences between the southern part of Scandinavia and the northern part may be viewed as different strategies, where the southern part is connected to a network strategy and the northern part is connected to a corporate strategy (Skoglund 2009: 202). In other words there are not necessarily cultural differences, but the archaeological material expresses differences. Johansen *et al.* (2003) and Skoglund (2009) question whether the dominant framework for explaining social organization in Bronze Age Scandinavia should be the chiefdom model. In this way the cultural frame may have been much the same, but there are local differences in how this is expressed and practised. The question we may ask is how this would differ in our understanding of local societies across northern Europe. There is certainly a problem with scale when looking at the broader part of northern Europe during the Bronze Age, as the materialization and studies are unevenly distributed, with a majority focusing particularly on the southern part of this region. This also connects with the issues that we want to bring into focus as chiefdoms, central places and so on are all defined in the southern part, while these issues have rarely been raised for the northern part. When one tries to explain variation in size, spatial distribution and function, the very northern part of the region in focus falls on uneven ground.

Regardless of the approach, these local societies were part of exchange with other areas, but they did not necessarily accept all new ideas. Rather, they transformed the ideas, knowledge and new products into their own regional expression. Regional expressions also created a diversity of identities across northern Europe during the Bronze Age, not only on a hierarchical or vertical level but also across regions on a horizontal level. These were not necessarily the same from region to region, but it created many different strategies, as well as local and regional identities across northern Europe.

Regions, globalization and resistance

Regions are often equated with settlement patterns, which gives a rather static view of them, by no means similar to either prehistoric or present situations. This is historically connected to the focus on comparable patterns in the archaeological record – a relict of the culture-historical archaeology, rather than focusing on differences in the archaeological material and explaining these. This is seen by the differences in the approaches of Maria Yushkova, Mika Lavento and Sophie Bergerbrant to the conceptualization of regions and their basis.

The second part of this book starts off with a chapter by Maria Yushkova, who considers the northwestern part of Russia on the periphery of northern Europe during the period 2000–500 BCE. The main focus of the chapter is the metal objects, which are compared with those of the neighbouring regions, particularly Scandinavia and the Volga-Kama region. The chapter points towards a shifting focus of impulses and is a good example of overlapping distribution and spheres of influences from central Sweden to northwestern Russia. This leads Yushkova to argue that northwestern Russia was part of the northern European Bronze Age culture, while at the end of the period this changed.

The lines of contact east of Sweden and Finland are not new, though Lavento's point of departure in Chapter 8 is that Finland is by no means on the periphery of the Scandinavian Bronze Age, and that there are in fact a number of centres in the generally assumed periphery. Lavento uses centre as a condensation of cultural elements defined in opposition to the surrounding areas. Based on traditional centre–periphery relations, Finland would fall in between the two centres of Seima-Turbino to the east and southern Scandinavia to the west. Much like Bronze Age studies in Scandinavia, Finland has been strongly influenced by a believed dichotomy based on cultural differences between the coast having a Bronze Age and being where agriculture was introduced, and the inland which was different with little or no agriculture.

In Chapter 9, Sophie Bergerbrant discusses regionality based on burial material from the Middle Bronze Age in southern Scandinavia and Lower Saxony. She argues that borders and regions are often taken as a constant within archaeological research. Bergerbrant questions this and argues that different parts of an archaeological culture/tradition can react differently to social changes and in the process cultural/regional borders can change, and different areas within a cultural geographical zone may not respond in the same way to new impulses. In this way the changes in the Middle Bronze Age in both central and northern Europe created new patterns of styles, creating new bonds as well as breaking up old ones.

However, the tendencies in archaeology with a stronger focus on identity and differences may also be connected to larger trans-regional processes and globalization. We may think of regions as partly overlapping layers, consisting of differences in social, economic and ecological adaptation and organization, which would create different zones and contrasts based on networks and identities framing influences, acceptance and resistance. In this way a basis for integration of a larger Bronze Age "network" would slowly develop with contrasting and overlapping areas. A good example is Chapter 10, by Thomas Eriksson. Based on an analysis of the LBA Lausatian pottery in Mälardalen in Sweden, Eriksson shows that the pottery does not stem from the Baltic area, although it is made the Lausatian way. This is important in order to understand how local societies react and pick up selected stylistic elements. Eriksson argues that names of cultures and artefacts designated to a specific area and period may in fact lead us to think in terms of inter-regional contacts, import and trade. In this context the terminology of the pottery may be misleading, at best. In the period from 1400–500 BCE in Sweden there are many similarities with central Europe that cannot be explained without cultural or personal transmission. Eriksson points out that most attributes and vessel forms in Sweden have their counterpart in central Europe; however, the basic forms of the Lausatian tradition are missing in Sweden. There is also pottery that indicates eastern influences, but these are often in the minority at sites. Eriksson sees the traits in pottery as part of a continental package that influenced Scandinavia during the Early Bronze Age. However, during the LBA the forms were implemented and belonged to a local tradition, both from the east and the south, where Mälardalen forms a hybridity of different traditions.

Similarly, Peter Skoglund (Chapter 11) raises the question of why there is an uneven distribution of bronze items, rock art and burial monuments, and argues that a shift of perspective from an individual to a geographical focus is needed. This is related to the production and reproduction of authority within a landscape claiming possession of the land people inhabit. In this way a wider geographic setting of rock art is incorporated. The notion of borderlands or third space is introduced, which can be viewed as meeting places in a very broad sense. By comparing the different regions, Skoglund suggests that there are important differences within ship symbolism and the context of ship images in the three regions discussed. However, in northern Bohuslän there seems to be a mixture of elements from different regions. This region has a strategic geographical location, which is interpreted as indicating a third space or a meeting region where we find material expressions that seem to make up a hybridization between different areas.

The last two chapters take different approaches towards understanding the introduction of metal and its early context in western and southwestern Norway. Christopher Prescott (Chapter 12) argues for a significant shift in the Late Middle Neolithic–Late Neolithic transition, a shift when political economy, hierarchical institutions and hereditary political control is established. In this sense Prescott argues for a move from local versions of evolutionary typologies to a decontextualization of local narratives to a responsive historical narrative. Here he argues that there are broad patterns of regional and continental historical patterns that are reflected in the peripheries, emphasizing the deep structural and historical forces that were at play during the Late Neolithic and Bronze Age. He suggests there are strong arguments for a social and economic transformation and a culmination of the Neolithization process from the early Late Neolithic, which was related to the Bell Beaker Culture and the evolving Bronze Age societies of northern Europe. Prescott links this to migration, and the initial introduction of metallurgy and other stylistic traits inspired by metal artefacts. In a slightly contrasting manner, Nils Anfinset (Chapter 13) questions why the number of bronzes in western Norway is low compared with Denmark. He argues for a strong and dynamic periphery, which actively chooses and engages in the impulses from the core areas to the south. Here the argument is a strong Neolithic background based on sharing, which is seen when the metal is first introduced to western Norway, while the real shift occurs in period II. This may be interpreted as a kind of resistance or inertia.

Although the aim here is not to point towards a globalized world such as we have today, there are certain long-term processes in the periods discussed here that had fundamental impact. The scale would have been totally different from the present, but significant nevertheless. In other words, we may view the societies and people considered within the time frame here to be just as globalized as today – though on a different scale. People did communicate across large regions in prehistory as well, but this also means that we have to move away from the stereotypes of archaeological culture. Using Castells's concept of "space of flows", which on a small scale considers information and transactions transmitted without physical proximity, may be one alternative. Here technology and knowledge of not only metal, but also agro-pastoral technology, may be of importance to greater connectivity within northern Europe. In this way knowledge focuses not only on technology but also on other factors of culture that promote social reorganization and change.

Further possibilities

As pointed out in the beginning of the introduction, we see this book as a point of departure for further discussions on the northern European Bronze Age. We hope that this book will be a starting point for further and different approaches and analysis of Bronze Age northern Europe in comparison with central Europe. In this book many of the chapters point out that there are different ways to handle impulses, and that the impulses were not one-way, but rather there are multiple ways of influences and inputs. Several of the chapters also point towards clear local identities based on the archaeological material, and it is significant to understand the mechanisms in each context that lead to local identities and adaptations. Here it is possible to analyse regional shifts and resistance, as well as to challenge mainstream ideas and interpretations of the Bronze Age. Ultimately, by analysing the local responses we will be able to see and compare differences and nuances that create identities, regions and networks on a larger scale.

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Part I

Identity, Grand Narratives and Networks

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1

Approaching a complex past: entangled collective identities

Charlotte Damm

Introduction

In contemporary archaeology there is a general understanding that societies are not bounded homogeneous entities. In our theoretical arguments we emphasize heterogeneity, hybridity and creolization. It is, however, altogether less clear how we are to transfer this to actual interpretations of archaeological and perhaps especially prehistoric data. In the following I will present an attempt towards a more in-depth view of the complexity of collective identities in the Early Metal Age of northern Fennoscandia.

The heterogeneous society

The Sámi is an indigenous population in northern Fennoscandia, who were historically settled in larger parts of the interior of the Scandinavian Peninsula and throughout the northernmost parts of present-day Norway, Sweden, Finland and the Kola Peninsula in Russia (i.e. an even more extensive area than indicated in Figure 1.1). Although it is generally agreed today that most of the cultural elements that we recognize as specifically Sámi emerged in the centuries around year 0 (Hansen & Olsen 2004), there is strong cultural continuity back into the Stone Age. Despite long-term interaction with farming communities, these northern societies held on to their hunter–fisher lifestyle. Only during the second millennium CE did many Sámi groups begin nomadic reindeer herding, partly on a large scale. The Sámi speak a Fenno-Ugrian language (Sámi), contrary to the majority of the population in Norway and Sweden, who speak Germanic languages.

Many non-Sámi residents, particularly in southern parts of the Nordic countries, have regarded the Sámi as a rather homogeneous entity. If, however, we zoom in and look at this apparent entity in more detail, a rather more complex and heterogeneous pattern emerges.

The Sámi language may be divided into different language areas – usually eastern Sámi, northern Sámi, Lule-Sámi and southern Sámi. At yet another level we may speak of ten to twelve different dialects within the Sámi language (see Figure 1.1). In addition,

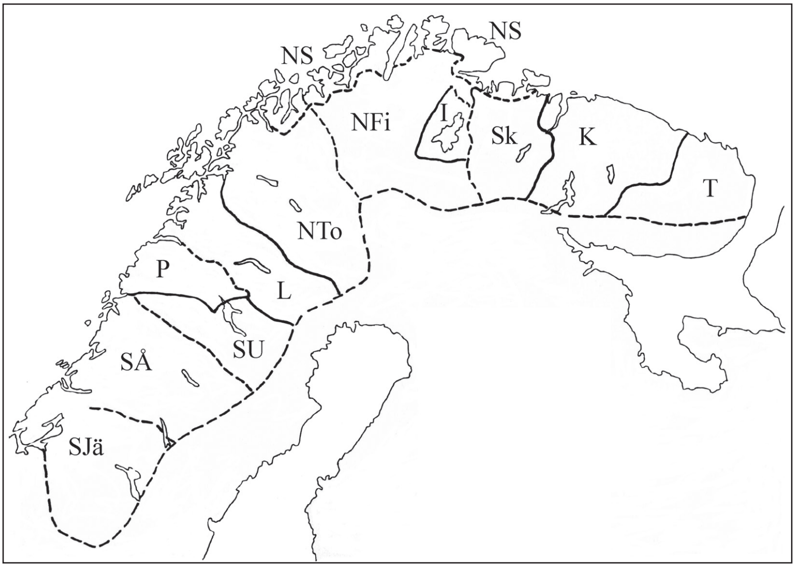


Figure 1.1 Sámi dialect groups. South Sámi: SJä (Jämtland), SÅ (Åsele Sámi), SU (Ume Sámi). Lule Sámi: P (Pite Sámi), L (Lule Sámi). North Sámi: NTo (Torne Sámi), NFi (Finnmark Sámi), NS (Sea Sámi). East Sámi: I (Inari Sámi), Sk (Skolt Sámi), K (Kildin Sámi), T (Ter Sámi). Map modified from Sammallahti (1989).

at least two dialects are now extinct (Akkala-Sámi and Kemi-Sámi). The dialects are not all mutually intelligible, although neighbouring dialects always are, forming a dialect continuum. It is also important to remember that in the past many individuals would have been bi- or tri-lingual, mastering or at least understanding several dialects as well as the language of one of several non-Sámi neighbouring societies.

The Sámi traditional costume (*gákti* in northern Sámi) varies somewhat from region to region, to a certain extent corresponding to the dialect areas. If we look at the area where northern Sámi is spoken, we find that there is more than one dress style in the region. Costumes differ between Kárášjohka and Guovdageaidnu (Karasjok and Kautokeino), two of the main settlements in the interior of Finnmark. Within each of these settlements there are several large and prominent families. Some of these families may be divided into several sub-families, each herding their reindeer in separate grazing/pasture districts. This tier of divisions according to main ethnic group, language dialect, dress area, family and grazing/pasture districts could be viewed as a set of segmented collective identities (Jenkins 1997; Damm 2010). Any individual may in varying situations present herself as Sámi, northern Sámi, from Guovdageaidnu or of a particular family. All of these identities can be found in one person, and which is more relevant depends on the situational and historical context (cf. Evjen 2004; Damm 2010).

Collective identities, however, cannot simply be investigated by repeated dissections, and organized according to different levels or boxes within each other. Segmented identities are only one part of the diversity. Many other identities overlap each other in complex criss-crossing patterns. In Kárášjohka and Guovdageaidnu there are nomadic reindeer herders, but also permanently settled small-scale Sámi farmers (*dalonat*). In the fjords and along the coast we find coastal Sámi, who traditionally subsisted on fishing and small-scale husbandry. These identities cut across the above-mentioned. Other collective identities that may have existed could be related to age and gender, religious communities (various churches or congregations), specialist vocations, and so on.

In addition to such collective identities, many other aspects contribute to a complex network of relations and interactions. Between individual herder and coastal families there were "*verdde*" relations (Eidheim 1966; Evjen 2007). These "guest–friend" relations were based on mutual exchange of goods and services. The herders, taking the reindeer to the coast for summer grazing, needed access to boats, help to herd the deer across fjords and sounds, and a place to store items through the winter when they were inland. In return they provided the coastal families with reindeer meat and winter clothing made from reindeer hide. Quite often the herders agreed to herd a few deer for the coastal families as well (custodial reindeer; in Norwegian, *sytingsrein*).

Such symbiotic relationships were perhaps more common in prehistory than is sometimes anticipated in centre–periphery models where non-stratified communities are often portrayed as exploited by what are considered to be dominant groups. Symbiosis may spring from ecological and economic differentiation, as in Barth's classical example from Swat (Barth 1956; see also Wood 1974). Spielmann refers to this as mutualism, which involves the exchange of items or services between communities with a certain degree of specialization in food production or other resources, and which creates interdependence between the interacting groups (Spielmann 1991: 5). However, symbiosis may be established on other bases as well. Howell (1994) has demonstrated how the Ainu and the Japanese depended on each other for very different reasons: the subjugated Ainu economically to obtain ironware, cloth, rice and tobacco, the Japanese in the Matsumae domain in order to retain political power within the larger Tokugawa shogunate. The latter was achieved by asserting themselves as intermediaries between the shogunate and the Ainu. The mutual dependency was symbolically manifested through ritual exchange, perceived by the Ainu as taking place between equals, but by the Japanese as indicating Ainu submission (Howell 1994: 81ff.).

Activating identities

Although an individual may have many identities, these are not all active at the same time (Damm 2010). An interesting experience is related by the historian Bjørg Evjen (2004). One of her female informants grew up in a Sámi family in a mixed Sámi–Norwegian community in Tysfjord in Nordland county. In the 1950s she moved to Kautokeino, partly because she wanted to experience life in a larger Sámi community. While living there she realized that although she was Sámi, she was different from the Sámi she now lived among. At the time she was not able to substantiate the difference, but as she says: "I learned later that I was a Lule Sámi, they were northern Sámi" (Evjen 2004: 41).

This demonstrates, as argued by Sian Jones (1997), that identity is historically situated, and based on social and cultural practices. It is through the encounter with others that one becomes aware of or recognizes different practices. We are all embedded in a number of collective identities, but their relevance depends on the situation or context.

Awareness of difference does not, however, necessarily lead to mobilization of a collective identity (Damm 2010). Not all cultural differences are immediately employed to reinforce or activate identities. Collective identities may be mobilized under a variety of circumstances. Latent identities may be mobilized when the groups in question come under pressure, but they may also emerge due to more organizational purposes, as originally suggested by Barth.

Categorization and activation of identities is not always initiated from within a society, but may originate in external perception and designation (Jenkins 1997; Damm 2010). The effect of external categorization has only to a very limited degree been acknowledged in archaeology.

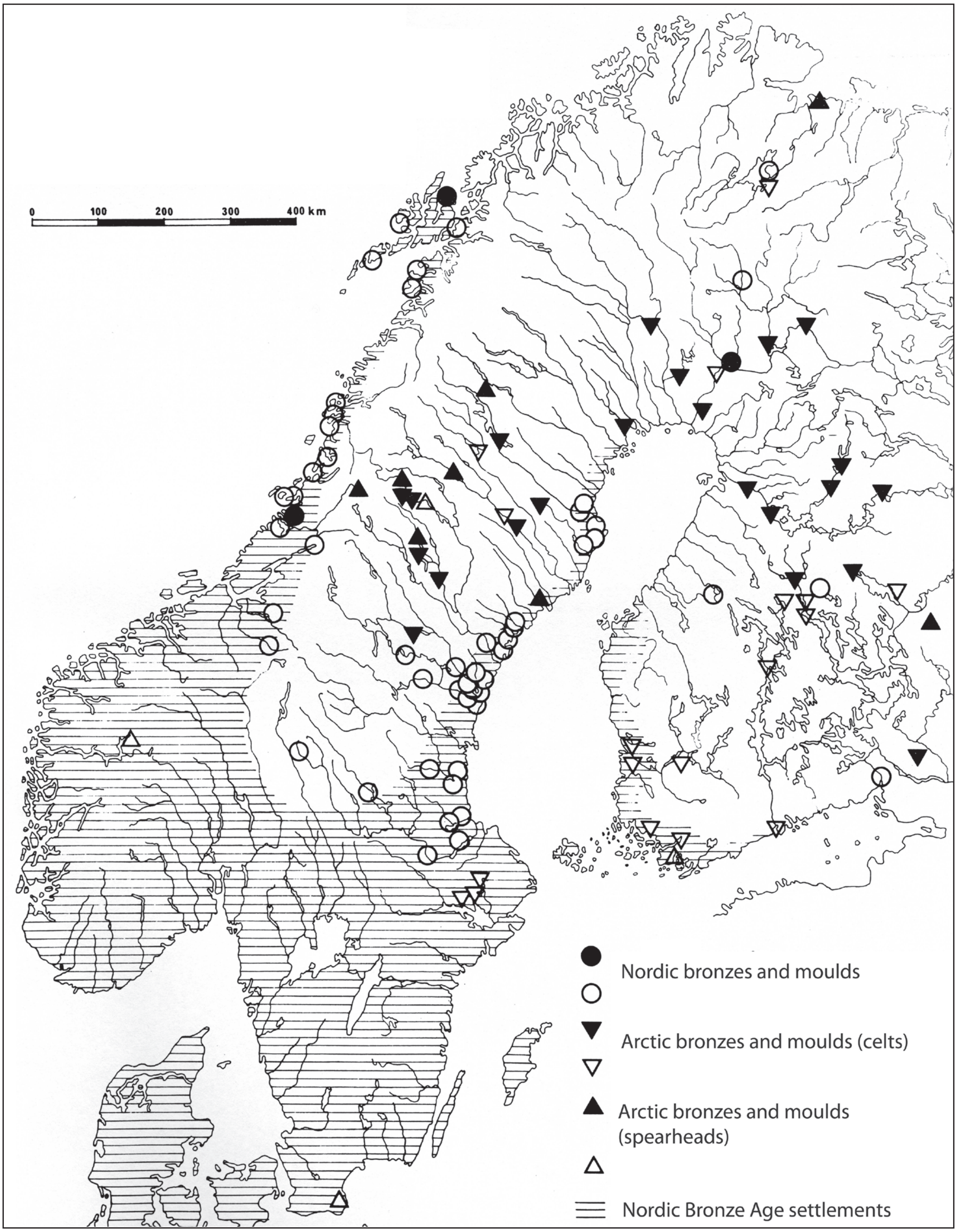
To briefly summarize some of the major introductory points, most would today agree that within and between communities there are a number of collective identities at play. Some of these may be segmented, but others overlap, creating a more complex pattern. These identities are often situational, and there may be many non-activated, latent identities as well. Finally, identities are not always activated internally in a group, but may emerge from external categorization.

Cultural dualism?

The existence of some kind of cultural dualism in Fennoscandia is a persistent model (see also Jørgensen 1986). It goes back to the nineteenth century (Storli 1993), was repeated by Brøgger (1909: 113) among others, and adhered to by Gutorm Gjessing (1942). The uniqueness of the northern regions was the basis for the development of separate period systems for northern Norway and Swedish Norrland in the 1960s (Christiansson 1961; Simonsen 1961, 1963). Similarly, Egil Bakka (1976) reintroduced the term "Arctic Bronze Age", signifying the areas north and east of the agricultural settlement (see Figure 1.2). He states explicitly that there were two distinct cultures in northern Fennoscandia: one representing outposts of the Nordic Bronze Age characterized by agriculture, cairns and bronzes, located in coastal regions in present-day Norway, Sweden and Finland; the other a hunting society found inland and in the northern- and easternmost areas, and with clear associations to the contemporary Russian cultures. In this latter region one now predominantly speaks not of a Bronze Age but of an Early Metal Age (Carpelan 1978; Jørgensen 1986).

The more traditional perception of strict cultural dualism is not used today. In particular the understanding of the emergence and maintenance of social and cultural groups has changed dramatically in recent research. Nevertheless there is general agreement that increasing contact and encounters with metal-producing and farming communities in the course of the last two millennia BCE caused a more acute awareness of cultural differences, eventually resulting in the emergence of Sámi ethnic identity in the interior and northeastern areas of Fennoscandia (e.g. Hansen & Olsen 2004). At much the same time, towards the end of the first millennium BCE, southern Scandinavia was integrated in the larger Germanic community. Similarly, in southwestern Finland agricultural groups entered into the Iron Age.

Without contradicting this scenario, it is possible to argue that the inhabitants of northern Fennoscandia in this period were almost certainly involved in complex


0
100
200
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400 km
● ○ Nordic bronzes and moulds
▼ ▽ Arctic bronzes and moulds (celts)
▲ △ Arctic bronzes and moulds (spearheads)
☰ Nordic Bronze Age settlements

Figure 1.2 Nordic and Arctic Bronze Age (according to Bakka 1976). Filled symbols represent moulds.

patterns of collective identities, many of which would have been more immediately relevant to them than any overarching identity.

In the following I hope to demonstrate that even though many data support an initial distinction between two major groups, zooming in even slightly on the data will allow us to see much greater diversity. I will focus on possible diversification within the northern hunter–gatherer communities in the Early Metal Age, but similar dissections would of course be possible with respect to the agricultural communities in the so-called Nordic Bronze Age.

Internal cultural diversity

In the course of the first few centuries after 2000 BCE some prominent changes take place. One is the introduction of asbestos-tempered pottery into northern areas of present-day Finland (north of Kemijoki), Sweden and Norway[1], where pottery was never used before (with the exception of early northern Comb Ware in limited areas in the first half of the fifth millennium BCE). Another new artefact type is the bifacial point in quartzite. There are a number of different types of quartzite bifacials, some of which may vary in time, others in space (Hood & Olsen 1988; Forsberg 1989b). The use of slate for artefacts such as knives and points gradually diminishes, while use of quartzite increases. In the course of the last millennium BCE all use of lithics practically ceases. Bronze artefacts occur in limited numbers, as do moulds, indicating some local production. Local production of iron artefacts is initiated, with dates as early as 600 BCE (Olsen 1994).

With a time span of two millennia there is of course a good deal of chronological and geographical variation in the archaeological data. The spread of the asbestos-tempered pottery must be linked to the late Neolithic wares in Finland. The earliest styles found beyond Finland (Pasvik Lovozero wares) are limited to northeastern areas. These are followed by textile pottery and imitated textile ware. The former has a very wide distribution, extending from western Russia across Finland and into northern Sweden, and is found throughout northern Norway. It is important to note, however, that there is marked regional variation within the textile pottery. In Finland, for instance, this ware is seldom tempered with asbestos and may be divided into a number of more local styles (Lavento 2001, 2005). Similarly, recent studies suggest that the Swedish material may be separated into several local variations (L. Forsberg, personal communication). In the first millennium BCE this is succeeded by another more thin-walled ware (often referred to as Kjelmøy Ware in Norway and Asbestos Ware in Sweden). Again there are several local styles (Lavento 2001, 2005; L. Forsberg, personal communication). Along the western coast of Norway (from Troms county southwards probably into Hordaland county) a different, rather thick-walled asbestos-tempered type is found: the Risvik Ware (800–400 BCE according to Andreassen 2002).

While much of the habitation in northern Fennoscandia during the final part of the Late Stone Age was widely sedentary, or at least semi-sedentary (moving between a few seasonal settlement sites within a limited geographical area), the mobility patterns now change. In all regions of northern Fennoscandia the number and size of dwelling structures decrease dramatically. There are good indications that a larger part of the population in the north engages in seasonal mobility over wider distances with more intensive exploitation of formerly only sporadically used topographical zones, such as the Scandian mountain region (Forsberg 1989a; Holm 1991). This appears to be linked to intensification in reindeer hunting in the summer and autumn. This would result in a resource area that in northern Sweden spans from winter settlements in the forest region westwards along water systems up into the mountains, where quartzite was quarried and where the reindeer spent the summer (see Figure 1.3). Similarly, an increase in pit falls in northern Finland in the Late Neolithic and the beginning of the Early Metal Age indicates emphasis on reindeer hunting (Halinen 2005). The same is indicated by the more extensive use of the interior of northern Norway (Troms and Finnmark counties). In the latter case, winter settlements may have been located at the head of the fjords, although detailed studies of the settlement pattern for the period are still lacking.

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[1] For the sake of simplicity modern national and geographical designations are used to clarify location and distributions.

In some areas large dwelling depressions, as they are known from the Late Stone Age, continue for some time, although they appear to be fewer (H. Johansen 1998). This may suggest that some communities primarily exploited the coastal region (fjords, sounds and outer coastal areas), either within a limited resource area or with possible seasonal movements between inner fjord and outer coast. The technology for marine exploitation was well developed, as evidenced in osteological data and preserved bone artefacts from the Late Stone Age as well as the Early Metal Age (Olsen 1994). In

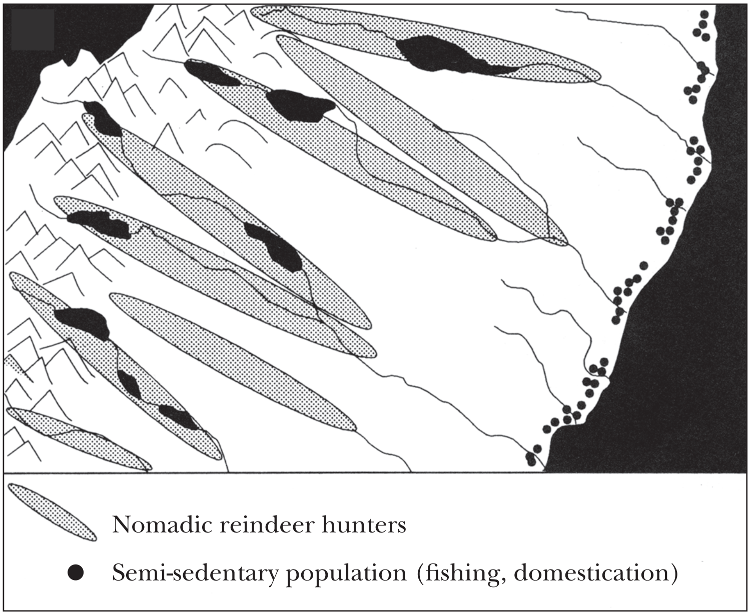

Figure 1.3 Schematic presentation of settlement patterns in northern Sweden in the Early Metal Age (from Forsberg 1993).

Finland, as elsewhere, the number of sites diminishes markedly and semi-sedentary villages disappear (Lavento 2001). This has been interpreted as a shift towards greater mobility. However, the settlements along the coast of Ostrobothnia are believed to continue a subsistence with a main emphasis on sealing and other coastal resources, but including some freshwater fishing. In the inland lake districts of eastern Finland freshwater fishing and hunting presumably prevailed (Huurre 1983).

Along the coasts of Norway (up to Senja in southern Troms county), Sweden (up to Bjurselet in Västerbotten) and southwestern Finland, the evidence for husbandry and agriculture increases steadily through the millennia, with a clear consolidation a few centuries BCE. In northern Sweden there seems to be a series of localized introductions from around 2500 BCE at the latest (e.g. Hedningahällen, Bjästamon, Bjurselet), with more definite evidence of some elements of husbandry and agriculture from about 2000 BCE onwards (e.g. Mårtenfäboda), although the economic importance appears to be limited even through the better part of the Bronze Age (Baudou 1992; Welinder 1998: 104; Forsberg 1999; Holm 2006: 190; Runeson 2007).

In Norway there is evidence of sporadic clearance and heath north of Trøndelag in the third millennium BCE. Permanent, but apparently small and local human heath is found at various points along the coast, starting at Vikna in southern Trøndelag county around 1800 BCE, at Dønna around 1500 BCE, at Straumøy (Saltstraumen) around 1400 BCE and at Austvågøy in Lofoten around 1000 BCE (Tveraabak 2004). Reliable dates of cereal pollen appear at the same time, although a few earlier dates are known as well. Macrofossils of cereals and domesticates are found from around 1500–1000 BCE (Johansen & Vorren 1986; O. S. Johansen 1990; Valen 2007). This indicates that some communities had some sheep, goats or cattle, and practised a little farming, although no extensive contribution to the subsistence need be inferred.

Much the same pattern may be found on the coast of southwest Finland, with the earliest dates for agriculture at around 2100 BCE, but with early dates even inland in southern and central Finland around 2300–2100 BCE (Alenius *et al.* 2009). Evidence of husbandry is found in the coastal region only. In both areas cultivation seems to have remained sporadic and small-scale for a long time, with hunting and fishing still central. This suggests more sedentary societies in some areas, predominantly along the coasts.

The introduction of husbandry and farming appears to be a very gradual development in both northern Norway and northern Sweden, with expansion, intensification and consolidation in the Iron Age. Whether husbandry and farming was adopted by local groups or introduced through immigration may vary from region to region. Along the Norwegian coast in Nordland and Troms the imported Neolithic artefacts appear to cluster in certain local areas, but still seem to be integrated in the local cultural context with artefacts of slate and quartz. Similarly, the Early Metal Age macrofossils of domesticates stem from contexts with otherwise “local” material (e.g. Stiurhelleren, Storbåthelleren, Hofsøy; O. S. Johansen 1982). Although one can never exclude a small number of immigrants, as a whole the development seems to be based on local strategies.

While there was definitely some variation in settlement patterns and resource exploitation in the Late Stone Age (prior to 2000 BCE), the diversification in mobility patterns and economic orientation increases during the Early Metal Age. Briefly summarized, there appears to have been communities with long distance mobility engaged in large-scale reindeer hunting in the interior of northern Fennoscandia.

Other groups may have been based predominantly on coastal resources possibly within several different settlement patterns (from semi-sedentary to extensive seasonal mobility). Some groups may have subsisted on freshwater fishing and hunting in the forest areas. Finally, some groups gradually adopted husbandry and farming, although for the major part of the Early Metal Age they were probably never independent of fishing and hunting.

Taken together, the chronological and, in particular, geographical variation, and the increasing economic diversification, present a more complex and heterogeneous image of the situation in northern Fennoscandia during the Early Metal Age. Based on these data it may be possible to divide the wider region into a number of smaller economic, social and cultural entities. To do so would, however, fail to address the full complexity of the matter. Such an approach would limit itself to an understanding of collectives as segmented. Moving from larger to smaller entities does not solve the overall problem of portraying human societies as closed entities, generating an expectancy for archaeological assemblages with clearly delimited boundaries. If we are looking for more complex and entangled collective identities, we need a different approach to the data that will allow such observations.

A networking perspective

Instead of perceiving interaction and contacts as something taking place between homogeneous entities (large or small), I suggest an approach where such entities are put aside and replaced by a search for a multiplicity of networks and collective identities. As the brief exposition on the Sámi suggests, all societies will recognize a wide variety of collective identities at various levels and relating to many different contexts and issues. In order to look for networks we should focus neither on assemblages of cultural characteristics, nor on ordinary patterns of distribution. The first question must be what social and cultural practices may have been active and to what extent they related to collective identities.

We may safely assume that in northern Fennoscandia there were a large number of local communities of varying sizes. Each community would exploit a well-known, but not necessarily bounded, resource area. In some cases the resource areas of two or more communities may have overlapped, in particular if they exploited different resources (for a later example of this see Nielssen 2008: 202). As argued above, there would have been different mobility patterns and different subsistence bases. Some would have been more or less sedentary; others practised at least seasonal mobility, where the community may have split up into smaller groups at certain times of the year. All of the above are different kinds of economic networks.

Assuming that each community was relatively stable, with most individuals remaining within the same community for the majority of their adult life, this community would have been a most important network. An individual would have identified with the group as a whole and with the landscape of the resource area as central parts of the economic network. Such areas would, however, not exist independent of, for example, social and ideological networks such as kinship, clan systems and sacred or mythological sites.

Since there was apparently some economic differentiation, there would have been a variety of competition, mutual identification, collaboration and complementarity between communities. For some tasks individuals from several communities may have come together to provide a larger task group or network (larger hunting parties, clearing of pastures, etc.). Neighbouring reindeer-hunting communities probably experienced a strong sense of "sameness" based on similar settlement patterns and economic organization. At the same time they may have competed for hunting rights at some of the best locations and for exchange partners among economically different communities.

Access to and exploitation of different resources would have set fishing, hunting and farming communities apart from each other, but would at the same time have laid the ground for exchange of goods and services. But the distinction is not exclusively or even necessarily foremost between foragers and farmers. The increased economic specialization in the Early Metal Age would have encouraged different exchange patterns in different regions:

- between coastal farmer/fishers and inland reindeer hunters (along the coasts of Swedish Norrland and Norwegian Trøndelag/Nordland);
- between coastal farmer/fishers and full-scale farmers;
- between coastal farmer/fishers and coastal fishing communities (interspersed along the coast);
- between inland reindeer hunters and coastal fishers (in northernmost parts of Fennoscandia, including northern parts of the Gulf of Bothnia); and
- between fjordal fishing communities and outer coast communities (in coastal regions in Troms and Finnmark).

Obviously, not all individuals would remain settled in the same resource area throughout his or her life. One of the most basic reasons for relocating into another community would be marriage. Most, if not all, communities would have been too small to regularly allow for marriage within. Moving to another community at marriage meant integration into a new network, without necessarily abandoning the old. Ties would remain with family in the childhood area, as well as with siblings possibly settled in yet other communities. Such "new" resource networks may, however, have been somewhat familiar. Perhaps aunts or uncles lived there, and visits may therefore have taken place through childhood. In many cases we may expect marriage to have taken place between communities with similar subsistence bases, but occasionally marriages would cut across this, thus complicating the networking pattern (for a study of more recent marriage patterns see Evjen 2008). Even disregarding this eventuality we see that portraying allegiance and collective identities as segmented within one economic system is an oversimplification.

If communities were exploiting different resources, they were probably organized differently with regard to task differentiation and seasonal activities; their dwellings and settlements are likely to have been structured differently and the tools they needed would have varied. However, as most groups would have engaged in some hunting and/or fishing, tool types are perhaps not where we should expect the most pronounced distinction. Quartzite bifacial points, for example, are found at the coast as well as inland, although the quantities vary. At Slettnes on the coast there was a total of twenty bifacials (Hesjedal *et al.* 1996), whereas the inland sites Virdnejavre 106 and 112 had sixteen and eighty, respectively (Hood & Olsen 1988). In contrast slate tools are rare on inland sites, while Sunderøy slate points are frequent along the coast, as are other slate tool types in the second millennium BCE. Scrapers are common everywhere and pottery is found across the region.

It may be tempting to associate the spread of pottery with the mobile hunting communities, but it is certainly a technology that is not exclusive to these. In several places asbestos-tempered pottery is found in contexts that are associated with husbandry or farming (Hofsøy at Senja, Storbåthellaren at Flakstadøy in Lofoten). In other places asbestos-tempered pottery is found in the vicinity of sites with documentation for early domesticates, although not at the same site (Dønna, Saltstraumen, Vestvågøy, Andøya; O. S. Johansen 1982; Johansen & Vorren 1986; Jørgensen & Olsen 1988, Andreassen 2002; Tveraabak 2004). The rather late Risvik ceramics in particular seem to be linked to agricultural communities along the coast.

Thus, while there may be some correlation between economy and artefact distribution this is not straightforward. To discuss the background for this we must investigate practices of production and use.

A most important aspect for understanding networks and collective identities is the transmission of knowledge or learning networks. Children would have learned hunting techniques from the older generation and acquired hunting skills through participation in their childhood resource area. Similarly, they would have learned where and how to extract raw materials and to manufacture tools. Most learning would have been of a more informal kind (Gosselain 2008) rather than formal apprenticeships (Apel 2001). Children would assist parents and relatives in various tasks, and acquire knowledge through observation and discussion among adults. This transmission of knowledge would in many cases involve a combination of motor skills, knowledge of the landscape and resource area, as well as social and ideological integration. Such vertical or generational learning networks would contribute towards continuity in technological practices. Some practices would be retained by the individual through life. If an individual moved after learning a particular craft, the technology would then be transmitted to that area.

In other cases the learned practice may have been adjusted due to personal experience and experimentation, or due to interaction and communication with others. Importantly, knowledge of some parts of a *chaîne opératoire* may have been easily copied and transferred, while other aspects required long term interaction (Damm in press). Therefore some horizontal or relational learning networks also existed. An individual moving into a new area may either have adopted new practices there or introduced craftsmen and women in that area to new techniques. Some aspects may be transmitted simply by seeing a different vessel shape or decoration (i.e. only the pot, not the potter, has to travel; Gosselain 1998, 2000).

In some cases it has been argued that different distribution patterns may suggest marital residence patterns in prehistoric communities (e.g. Hallgren 2003, 2008; for a more guarded view see Gosselain 2008). It should, however, be emphasized that not all societies ascribed to very strict patterns and that many subarctic foragers appeared to allow for strategic choice (they are described as having a “multi-local” residence pattern, i.e. the couple may have settled in either his or her community; Marlowe 2004).

Studies of the quartzite bifacial points suggest that they were made within one technological tradition (the combination of direct hard reduction and pressure technique; Apel & Darmark 2007). There were, however, regional formal variations within that tradition (Forsberg 1989b), indicating that although technological insights and practices were shared widely, more local learning networks existed leading to regional styles.

The situation for pottery is even more complex. It is widely agreed that, as with lithic technology (Apel 2001), ceramic technology entails a certain amount of learning (Gosselain 1998, 2000). This means that for the technology to spread from Finland to the north and west, some demographic movement must have been involved (Damm in press), possibly (but not necessarily) migration, marriages or long-term journeys or visits. The pottery of the Early Metal Age may be divided into several regional styles. Unfortunately, these styles are predominantly based on characteristics such as decoration and form, elements that may quite easily be copied. They do not require any extensive interaction between potters to be transmitted. To obtain better insight into the practices and learning networks more emphasis should be put on tempers, manufacture and firing (Damm in press). Such studies may reveal other distribution patterns, which may be better designed to disclose different types of networks.

While the existing typological categorization of ceramics and lithics may be debatable in that it is generally old, coarse and based on formal variation rather than technological elements, the unquestionable variation nevertheless does suggest the existence of different learning networks for different types of artefacts, indicating the existence of a variety of contemporary networks.

In the above I have limited myself to discussing possible networks that are more or less directly linked to economic organization and related technology. A multitude of other networks originating in various social and ideological patterns and practices probably existed. Examples may include kin systems (clans or lineages), age groups, religious organizations, artisan or other specialist groups.

Entangled identities

When investigating prehistoric groups we often turn first to economic differentiation, making clear divisions between foragers and farmers. This is often argued to be a central aspect of ethnic differentiation (e.g. Damm 1991) and is part of the foundation for Bakka's (1976) distinction between the Nordic and Arctic Bronze Age. Economic differentiation characterized by distinct settlement patterns and varying subsistence probably has a long history in northern Fennoscandia, even before this involved any elements of farming (e.g. Schanche 1994; Hodgetts 2010). This would have been common knowledge and is likely to have been used in both internal and external references/categorization. It may have been employed for mutual benefit in interaction and exchange. That some groups in the Early Metal Age were predominantly mobile and based on hunting and others were to a great extent sedentary with a marine or mixed (farming) economy was consequently not a completely new phenomenon. Considering the limited extent of husbandry and farming in the early parts of the period, there is no reason to assume *a priori* that these communities perceived themselves as fundamentally distinct on this basis.

Though different economic networks probably led to increased awareness of distinct collective identities, other networks would appear to have crossed these, as evidenced in the distribution of surface treatment, for instance, or decoration resembling textile impressions, the widespread use of asbestos for tempering and bifacial points. Pottery and bifacial points spread throughout northern Fennoscandia (although pottery possibly not to all settlements, but to certain key sites or nodes; L. Forsberg, personal communication). These networks crossing communities with different economic bases and organizations may have histories going back to the Late Stone Age.

In the later part of the period husbandry and farming appear to increase in importance. While this may well have accentuated the differences, I believe that it is important to emphasize that the distinction is not in whether communities farmed or not (as it may be argued that many foraging practices may be perceived to be active maintenance of the environment as well), but in all the social and cultural practices (cf. Jones 1997, 2000) that were an integral part of each subsistence system. Even limited involvement in husbandry and agriculture would in due course lead to different organization of space: in the selection of settlement location, in the form and organization of dwellings, in the layout of the settlement and in mobility patterns. It would affect divisions of labour and, as a result, most likely perceptions of gender and age. And it would lead to different diets, if not so much on an everyday basis, then at least with regard to special social and religious events. Through the development of such different practices a new basis for distinct collective identities emerged.

As has been suggested (Hansen & Olsen 2004: 38, 53) these collective identities were possibly emphasized through greater differentiation in material cultural practices. Kjelmøy ware and Risvik ceramics have almost exclusive distributions. Whether or not this was a conscious choice or the result of separate learning networks is not the issue here. In any case, this added to the number of social and cultural practices that distinguished communities.

Bakka's (1976) demonstration that the bronzes along the coasts and those in the northeastern and interior regions derive from different directions still stands. The majority dates from the first millennium BCE (Late Bronze Age and Ananino imports respectively), and the impression of intensified contacts with the south in the first millennium BCE is, at least for the Norwegian coast, supported by finds of ceremonial stone axes and soapstone vessels (Jørgensen 1986). The bronzes and other items associated with the Bronze Age and Early Iron Age in southern Scandinavia probably indicate integration into a social network based on social stratification. It is less clear how we should interpret the eastern bronzes and moulds, but they undoubtedly demonstrate the transmission of new technological knowledge into the hunter–gatherer groups.

Religious beliefs and practices also changed, at least within the emergent farming communities. This is best visible in the cairns found along the coast of both northern Norway and northern Sweden. Small burial cairns are known also from the Stone Age (Liedgren 1994; Henriksen 2003). Many cairns are, however, related to burials further south in terms of structure and location (Jørgensen 1986, 1989), reinforcing the impression of gradual integration into networks based on social stratification, although it may be argued that they also fit the local tradition (Forsberg 1999). A few motifs from the agricultural tradition are found on rock art sites, but in most of northern Fennoscandia the tradition from the Stone Age is continued, although with some new elements (Bjerck 1995).

One important aspect of networks and identity, which is only rarely touched upon in archaeological literature, is language. Exactly when a Finno-Ugrian language, most likely proto-Sámi, was introduced in northern Fennoscandia is uncertain. Dating proto-languages is at best difficult. Some suggest very early dates with a common proto-Finno-Sámi language being spoken at least in southeastern Finland around 2000 BCE, with a split into proto-Finnic and proto-Sámi some time between 1500 and 1000 BCE (see the summary of this debate in Hansen & Olsen 2004, 141ff.), while others argue that proto-Sámi developed directly from proto-Uralic, perhaps 1000 BCE in eastern Fennoscandia or east of the Finnish Gulf, spreading north and west perhaps as late as the centuries around year 0. Proto-Germanic is believed (by some) to have been introduced during the last millennium BCE. Many of these dates, however, hinge on archaeological data and interpretation, which create a risk of circular arguments. Whether or not proto-Germanic and proto-Sámi were introduced during the Early Metal Age, the regional diversity in the archaeological data with regard to, for example, settlement patterns found already in the late Stone Age suggests that at around 2000 BCE at least several different dialects were spoken. Furthermore, language differentiation may have increased through the period, either as a result of kin and marriage networks creating certain speech communities, or as part of strategic mobilization of certain collective identities.

In summary, there is ample evidence for and indications of a complex web of collective identities associated with many different aspects of life in the northern communities. Although the economic patterns would have been important, there were also many social, ideological and other cultural networks that partly emphasized, but partly crossed, such economic and resource-based networks.

Conclusion

No society or community is an enclosed or bounded entity. If we portray and analyse prehistoric groups as such, we will not be able to approach the dynamic entanglement of collective identities based on a multitude of criss-crossing networks. An alternative approach, better designed to investigate complexity, is to look for numerous networks built on economic, social and cultural practices, including learning patterns, religious practices and language. These will produce a multitude of partly latent, partly active collective identities at many different levels and scales.

Although the accumulations of changes through the Early Metal Age in northern Fennoscandia resulted in networks that allow an external categorization, from archaeologists and from contemporary “Others”, to distinguish emerging Sámi collective identities in contrast to perhaps Germanic identities, in most contexts the collective identities were more nuanced, varying depending on the situation, the location and the involved networks. I believe many of these suggested networks and identities bring us closer to identities that would have been recognizable in the past.

The perspective presented here does not result in a new interpretation of the general culture-historical development. Nevertheless, replacing the rather bounded archaeological entities in the Early Metal Age in northern Fennoscandia with other analytical tools, such as networks and collective identities, does, in my opinion, present a more nuanced and dynamic understanding of the processes at work.

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2

Assymetric twins? Some reflections on coastal and inland societies in the Bothnian area during the Epineolithic and Early Metal Age

Lars Forsberg

Introduction

Culture-historical archaeology has to a large degree been based on the conceptual linking of culture and people. This is often seen as a relationship between groups living in a continuous area exhibiting a similar culture. Focus has to a great degree been on within-area similarities and between-area dissimilarities in material culture. This has produced archaeological cultures represented as plateaus of low variability bordered by zones with rapidly changing material culture. Groups are seen as cultural groups with large internal cohesion and contact, whereas contacts with "outsiders" are much less frequent. Culture is seen as normative and shared, based on ideas and bounded in space and time (Childe 1957; Hodder 1982: 1–12, 1991: 1–22). In archaeology it has often been based on gross groups of ceramic, lithic or metalwork styles. This paradigm evidently has a background in the analogy with nation states and their "people", *das Volk*.

At the same time, archaeologists have also been interested in society, which has been defined as groups of people involved in frequent interaction. This view was earlier seen in an evolutionary perspective, where different types of society were replacing each other, with the replacement society being more advanced and complex than the preceding one. In the 1960s and 1970s much research concentrated on the different levels of social organization and the transitions between them, creating the problem of how to explain cultural change (Service 1962; Fried 1967; Johnson & Earle 2000). In this evolutionary vein, the step between non-stratified and stratified societies has been seen as a developmental one, where the preferable or "higher" social state was that of the chiefdom. This concept of social evolution had part of its roots in sociology and social anthropology.

The division of human societies according to economic type has long been a baseline for the interpretation of history, and hence also prehistory. Perhaps the most fundamental difference of this kind is that between agricultural societies and hunter–gatherers. The step from hunter–gatherer existence to food production has been seen as a step forward in the evolutionary ladder of societal progression, which has often focused on contrasts in ways of life.

From the 1980s onwards there has been more focus on local societies that are participated in and that it is possible to move in and out of. These local societies are not such rigid entities as the ones referred to above. The focus here would often lie on a local group of people (a community or such) and its immediate surrounding area. There is nowadays increasing awareness of most prehistoric societies being small-scale and, to an extent, fluid. With the post-processual movement in archaeology, the social viewpoint took a turn towards agency and the individual's role in prehistory (Hodder 1986). Society as a web of relationships, a structure, was somewhat pushed to the background and instead archaeology was populated with knowledgeable, resourceful actors with individual power strategies, much like the views of contemporary society that dominated during the 1980s and 1990s.

From an interpretive perspective it is important to keep in mind the mental constructs that are being used in the interpretation of prehistory: cultures, societies, communities and actors are partly incommensurable and incompatible in that they focus on different aspects and levels of the human life-world. A research perspective based on shared culture or one based on economic type would result in quite different historical constructs than perspectives founded on local societies or individual agents. It is suggested here that several of these different perspectives have made the research on the prehistory of the Early Metal Age in Scandinavia as dualistic as the model of cultural dualism so firmly embedded and distinctive in Scandinavian archaeological research history.

There are of course certain aspects of the paradigms outlined above that are useful for the interpretation of the cultural relationships in the Nordic Bronze Age. It is however easy to agree with the main criticism that the resulting picture of two main culture areas given below is an oversimplification of a much more complex situation. It would nevertheless be as large a mistake to err too much on the particularistic side, to view the Bronze Age as a chaotic mixture of separate small communities without any larger structures and structured relationships working in-between.

In the following, an attempt is made to try to find aspects that can lead to a perspective of both local variation as well as larger structural commonalities. This attempt emanates from concepts stemming from a surprising source for archaeologists. The model was first launched in the late 1970s within the field of statistics and labelled as exploratory data analysis (EDA; Tukey 1977). This angle on statistics emphasized a hermeneutical, question-driven approach to real-world phenomena: to explore and find out what is out there. This was in stark contrast to the classical statistics, where theories and hypotheses were tested for their validity. The classical approach did not concern itself with how the theories were arrived at: this was inconsequential (cf. the parallels with processual archaeology). The EDA approach favoured a view on analysis that considered both main trends and structure, as well as variation and deviations from the trend. To examine both, Tukey argued, would lead to a better understanding of the phenomena studied than only focusing on one aspect. He introduced two general concepts to describe this two-sided approach: the smooth and the rough. The smooth is the general trend, something that catches the eye immediately, or which describes a general relationship between phenomena. It often forms a pattern under which separate cases are subsumed and "explained". This might in our example be equated with the general differences between the hunter–gatherers in the north and the agro-pastoralists in the south (see Table 2.1). The rough, on the other hand, is the deviations and variations around the general trend, anomalies that often have been suppressed, discarded or under-communicated, as the rough is seen as disturbing the explanatory potential of the general trend. In this chapter, some of these deviations are brought up and discussed.

Table 2.1 Some notions of the smooth.

South Scandinavia/Volga-Kama	Northern Fennoscandia
Centres of "culture"	Marginal; recipients of "culture"
Purveyors of metal	Consumers of metal
Hierarchical social structure	Egalitarian social structure
Elite networks	Purveyors of furs
Agropastoralists	Hunter–gatherers
Warrior ideology	Egalitarian ideology
Ideological hegemony	Ideological subalternity

The area chosen for examining both these aspects in this chapter is the relationship between what have been described as hunter–gatherer bands in northern Fennoscandia and the agro-pastoralists with Nordic Bronze Age culture along the coasts. This relationship between the groups living in the inland of northern Scandinavia and the coastal groups to the west and especially to the east of these has been discussed by several archaeologists during the last few decades (Baudou 1988; Selinge 1979; Broadbent 1982; Kristiansen 1987a; Forsberg 1996; Bolin 1999). The main line of discussion is whether it is fruitful to view this as a centre–periphery relationship, where the chiefdoms to the south had a dominant role and where the hunter–gatherers were suppliers of products in exchange for metal.

That the relationship between societies in the different Nordic areas during the Bronze Age has mostly been seen in the light of separate normative cultures and economies – as a cultural and economic dualism between southern agro-pastoralists and warriors and northern hunter–gatherers – is clear (cf. the binarism expressed in Figure 2.1). The agro-pastoralists living in the south and along the Bothnian and Atlantic coasts are seen as exhibiting several traits that distinguish them from the northern "Arctic" cultures. They had a hierarchical social structure, often described as chiefdoms (Kristiansen 1987b). The upper echelons of these societies were involved in elite networks connecting societies in wide areas via prestige goods exchange. It has been demonstrated that the high-ranked groups in these societies had an ideology where warrior and combat ideals were important (Kristiansen 1984). The main commodity suggested to have been circulated in the prestige network is metal, mainly bronze (or copper and tin), although other commodities such as amber and gold were also exchanged (de Navarro 1925; Shennan 1982; Sherratt 1993). The southern chiefdoms have also been seen as upholding some sort of ideological hegemony, resulting in a view that considers them as centres of culture from which new ideas spread out. A parallel general description has also been made for the hierarchical societies in the Volga-Kama area (Kuzminykh 1983; Patrushev 1984).

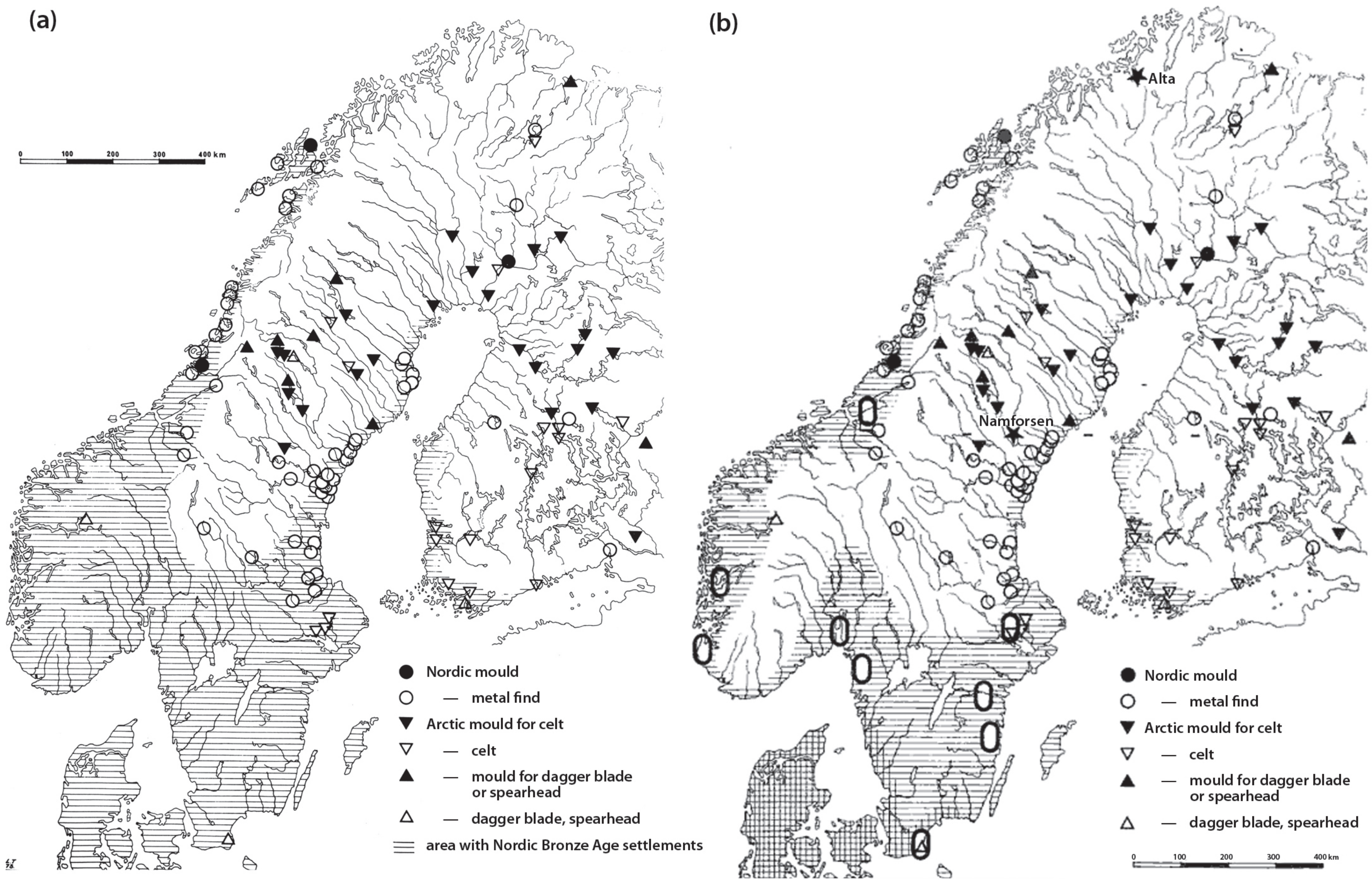
(a)
0
100
200
300
400 km
Nordic mould
— metal find
Arctic mould for celt
— celt
— mould for dagger blade or spearhead
— dagger blade, spearhead
area with Nordic Bronze Age settlements
(b)
Alta
Namforsen
Nordic mould
— metal find
Arctic mould for celt
— celt
— mould for dagger blade or spearhead
— dagger blade, spearhead
0
100
200
300
400 km

Figure 2.1 Picturing the smooth: casting moulds and metal artefacts from Bronze Age northern Scandinavia and Finland in maps by (a) Bakka (1976: plate 16) and (b) Kristiansen (1987a: fig. 8.5). The ovals on Kristiansen's map show the main areas with south Scandinavian rock art from the Bronze Age.

The hunter–gatherers, on the other hand, have been seen as small mobile bands with an egalitarian social structure. They were involved in exchange relations with the agro-pastoralists, receiving metal in exchange for fur. The relationship with the agro-pastoralists is often thought of as asymmetric, and the hunter–gatherers as marginal recipients of culture: a sort of ideological subalternity.

The perceived difference between the coastal and inland societies is also evident when considering the terminology of the chronological periods applied (cf. Table 2.2). The coastal societies have mostly been discussed in terms that connect them with southern Scandinavia: the Late Neolithic, Bronze and Iron Ages. The chronological terminology of the inland societies has been more varying, dependent on the different researchers' views. Of the terms used in this chapter, the Early Metal Age is used widely in northern Norway (Olsen 1994), northern Sweden (Baudou 1992), Finland (Huurre 1979) and Russian Karelia (Kosmenko 1992). The Epineolithic is used primarily for northern Sweden and was originally coined by Baudou to cover the period 2000–800 BCE (Baudou 1992: 95). In the present chapter this "dualistic" chronology is upheld for two reasons. First, a unified chronology would lead to some cumbersome constructs (like substituting Late Bronze Age/pre-Roman Iron Age/Early Roman Iron Age for the Early Metal Age); second, it reflects what is perceived here as a state of research where chronology is still subsumed under this dualistic structure. It is not only a neutral framework for archaeological interpretation, it is also laden with cultural meaning and has an implicit effect on our perspective on these societies.

Table 2.2 Chronological terms used in Chapter 2.

South Scandinavia and Bothnian coast		Northern Scandinavia	
Late Neolithic	2200–1800 BCE	Epineolithic	2000–800 BCE
Early Bronze Age	1800–1100 BCE	Early Metal Age	800 BCE–200 CE
Late Bronze Age	1100–500 BCE	Sámi Iron Age	200 CE–1050 CE
Pre-Roman Iron Age	500 BCE–1 CE		
Early Roman Iron Age	1 CE–200 CE		

A closer look at the hunter–gatherers

In many of the studies of the Early Metal Age, the hunter–gatherers have been viewed as relatively simple band societies, culturally similar to Mesolithic hunter–gatherers. As such they have been viewed as something of an anachronism (hence the term Subneolithic that is sometimes applied). This is perhaps a remnant from an evolutionary perspective where societies evolved culturally through prehistory until reaching our present level of development. Such an evolutionary perspective needs a baseline to compare the achievements with, and simple egalitarian hunter–gatherers fit the mould, not because of what they were, but rather what they were not (cf. Bettinger 1991: 6). It is not inconceivable that the view of the relationship between the hunter–gatherers and the agro-pastoralists as culturally asymmetric has a lot to do with such a theoretical backdrop.

In the second half of the third millennium BCE a radical change occurred in the semi-sedentary hunter–gatherer society subsisting on elk hunting and fishing (Forsberg 1989; Lundberg 1997). The societal pattern emerging during the last phase of the Stone Age is characterized by different raw materials for tools, different tool types and completely different settlement patterns, with increased mobility and a changed economy (cf. Forsberg 1989). During the centuries between 2500 and 2000 BCE, it is safe to say that such profound changes took place in the societies both along the coast and inland, that it must have been one of the most radical breaks in societal development of Norrland, Sweden. During the Epineolithic and Early Metal Ages, the societies of the interior seem to have employed a logistical mobility to a much higher degree than the preceding societies. In addition to utilizing the forest plain, these societies start to move into the mountain areas to the west. There seems to have been a widening of the resource base with an increased emphasis on reindeer hunting. The settlement pattern changes to one in which winter and spring settlement is located in the forest plain and where base camps are moved up into the mountain foothills in late summer and early autumn.

Looking at settlement and social units, it seems that a string of local societies based on river basins continues all the way from the southern part of Norrland up through the inland of northern Sweden to northern Norway. With minor changes, these societies uphold these ways of life throughout the Epineolithic and Early Metal Ages up until 200–300 CE, when there seems to occur yet another major shift in society (Forsberg 1989: 73–8; Bergman 1995: 196; Hansen & Olsen 2004). These local societies range from the southern part of Norrland and they have been documented by archaeological material up to the Lule River and beyond (see Figure 2.2). A great deal of research has been done and a relatively good understanding of the settlement patterns and

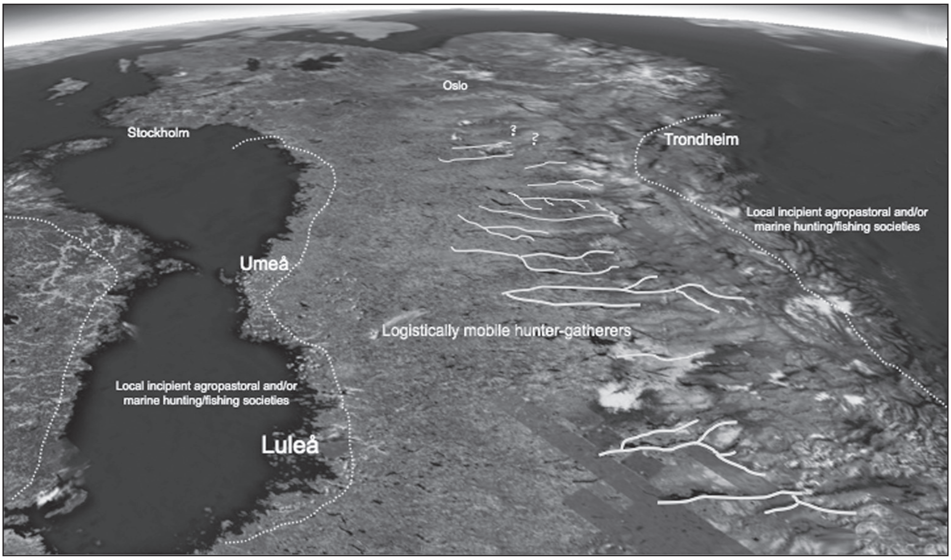
Oslo
Stockholm
?
?
Trondheim
Local incipient agropastoral and/or marine hunting/fishing societies
Umeå
Logistically mobile hunter-gatherers
Local incipient agropastoral and/or marine hunting/fishing societies
Luleå

Figure 2.2 Overview of different local societies in the north, 2200–400 BCE: local incipient agripastoral and/or marine hunting/fishing societies along the coasts and logistically mobile hunter–gatherers in the interior. Map based on Googlemaps.com.

subsistence has been achieved (Forsberg 1985, 1989, 1996, 2003; Holm 1991; Bergman 1995; Lundberg 1997; Spång 1997). The local groups used the western part of the forest plain and the lower parts of the mountain areas in a transhumant pattern following the rivers in a northwest–southeast direction.

Profound technological changes involved the massive employment of the bifacial technique for producing arrowheads in vast quantities (Holm 1991; Forsberg 2010b), the use of ceramic technology (Hulthén 1991; Forsberg 2001, 2010a) and eventually the start of metallurgical activities (Hulthén 1991; George 2001). The territorial map of these logistically-based societies changes radically from the band territories of the Neolithic.

Aspects of this new phase can be elucidated by following the introduction of new technologies: production of bifacial arrowheads and the introduction of ceramics (Forsberg 1989, 1996, 2010a, b). The phase can be roughly said to last at least between 2200 BCE and 400 BCE based on the dating of the bifacial points. They are one of the most characteristic traits of the assemblages from the Epineolithic and Early Metal Ages throughout northern Fennoscandia and Russia. The common type most referred to is the straight-based point. The most conspicuous feature is the base, which is wide and thinned down, probably to be shafted into either an arrow or spear shaft. Several researchers have suggested that these points were used in the period 1500–500 BCE (Carpelan 1962: 25; Baudou 1978: 17; Huurre 1986). In an earlier study I have suggested that in certain areas of North Fennoscandia they might continue to be in use up to around 1 CE (Forsberg 1985: 5). However, the dates were based on an uncalibrated chronology. Calibrating these dates would give a rough date of the period 1800–500 BCE, or alternatively 1 CE (Olsen 1994: 105; Forsberg 1996). There are several indications, however, that this period should be extended somewhat backwards in time. Helskog (1983: 63) suggests that the earliest date should be 2200 BCE, based on data from two houses at Iversfjord. Likewise, there are indications from Norrland, Sweden, that such points were used before the Bronze Age. At Lake Foskvattnet in Jämtland, further south in Sweden, several sites with bifacial points, as well as preforms and debitage from the manufacture of such points, were excavated in the late 1980s. Some of these results point towards a similar date for the points as suggested for Iversfjord (Forsberg 2003).

Bifacial points of the type discussed here are also found in abundance in Russia. They are found in assemblages of the Sintashta, Abashevo and Seima-Turbino types (Koryakova & Epimakhov 2007: 64, 81, 107). The suggested dates obtained by typology are between 1800 and 1500 BCE. Recently, precise carbon-14 dating has shown that these complexes rather should be dated to 2100–1700 BCE (Koryakova & Epimakhov 2007: table 0.3).

The pottery technology was introduced at differing times in different parts of northern Fennoscandia (Nunez 1990) but the introduction of asbestos-tempered pottery in northern Sweden and Norway during the second millennium BCE is the focus here. This so-called textile pottery is part of a widespread practice of pottery surface treatment stretching over a huge area from the northern parts of Russia to northern Fennoscandia (Patrushev 1992; Lavento 2001). By studying pottery tempered with asbestos (and in some instances with hair), where the vessel surface is covered with textile-like impressions, a picture of how the connections between people and groups of people might have played an important role emerges. This textile pottery was produced and used in the second millennium BCE. It is quite clear that this pottery occurs in larger

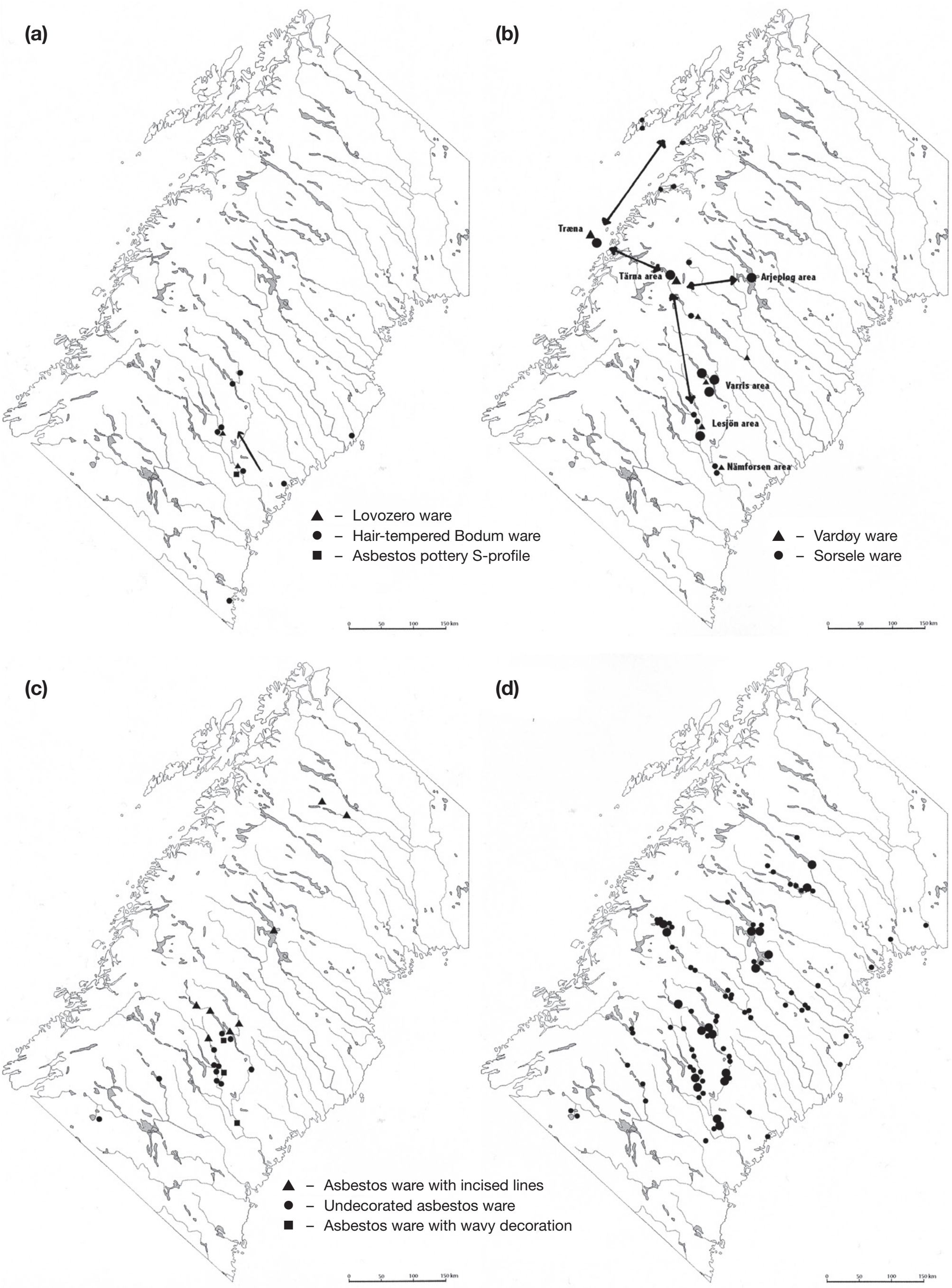
(a)
(b)
Træna
Tärna area
Arjeplog area
Varris area
Lesjön area
Nämforsen area
▲ – Lovozero ware
● – Hair-tempered Bodum ware
■ – Asbestos pottery S-profile
▲ – Vardøy ware
● – Sorsele ware
(c)
(d)
▲ – Asbestos ware with incised lines
● – Undecorated asbestos ware
■ – Asbestos ware with wavy decoration
0 50 100 150 km

Figure 2.3 The process of the introduction of pottery in northern Sweden, 2000–1 BCE: (a) early 2nd millennium BCE; (b) middle and late 2nd millennium BCE; (c) early 1st millennium BCE; (d) late 1st millennium BCE.

quantities only on a few main localities in the inland and on the coasts of the Bothnian Sea and the Atlantic (see Figure 2.3). It is also clear that several different varieties of textile pottery occur at the sites. It would appear that there were certain potters present at these sites with knowledge of various ways to produce pots and that they must have had contact with other potters at different localities far away. These medium-range connections do not go in all directions, though, but follow certain routes (pipelines) and concentrate on certain places in the landscape (nodes). This has been examined in detail in a separate study, and from this it is clear that there is a complex process of incorporation, use and spread of the technology throughout the inland societies during a span of roughly 1500 years (Forsberg forthcoming). It also seems that the pottery is used in somewhat different social contexts in the early and late phases of this process. The earliest pottery was introduced at the coast of middle Norrland and spread via the mouth of the Ångerman river farther inland on several of the branches of this large drainage system in middle Norrland. Subsequently, in the latter part of the second millennium BCE, societies in the inland of both middle Norrland and northern Norrland used the technology which also spread to parts of the Nordland coast. The pottery types from the early part of the first millennium CE tend to crop up in separate areas: one in northern Norrland and another in middle Norrland. Finally, during the late part of the first millennium BCE, the whole area was characterized by pottery of the Kjelmøy/Sär 2 type. Hence, in the course of the first millennium BCE, the inland was continually "filled up", so that the pottery did not only occur at certain nodes as before, but was present on most sites in the settlement areas, especially in the second half of the millennium.

The introduction of metal in northern Fennoscandia appears to have been a gradual process, starting slowly as early as the Late Stone Age, when a few copper objects occur on Comb-ware sites in Finland and northern Sweden (Huggert 1996). The first major introduction of metal is, however, more or less simultaneous with the introduction of textile pottery. It has long been known that this first metalwork was in the form of so-called Seima bronze axes, and it has been described as being limited to Finland (Meinander 1954; Lavento 2001). It is connected to a rapid spread of bronze objects in the vast area between the Urals and Finland, called the Seima-Turbino phenomenon by Russian scholars (Chernykh 1992; Koryakova & Epimakhov 2007). The spread of this material has been difficult to explain from a traditional culture-historical standpoint, because the metal does not appear to be related to local cultures, but appears punctually in singular graves or as stray finds. The date of the Seima-Turbino phenomenon has been set at around the middle of the second millennium BCE by Russian archaeologists but this date is based upon typological methods, and a few available radiocarbon dates suggest that it should be pushed back to the beginning of the millennium (i.e. simultaneous with the early dates of textile pottery; Koryakova & Epimakhov 2007: 110).

What is interesting is that this early metal in northern Fennoscandia does not only appear as a few stray axes, as was earlier assumed, but there is also evidence of this metalwork in northern Sweden and Norway, mainly in the form of daggers or casting moulds for daggers that are a typical part of Seima-Turbino assemblages all over northern Russia (see Figure 2.4). The distribution of axes and daggers is rather unusual. The axes mainly occur in south Finland and in Uppland in central Sweden, while the daggers and moulds occur in east Finnmark and central Norrland (see Figure 2.5). If one looks closer at the finds in central Norrland, they follow a similar general distribution as that of the textile pottery. Since moulds for daggers are found in northern Scandinavia,

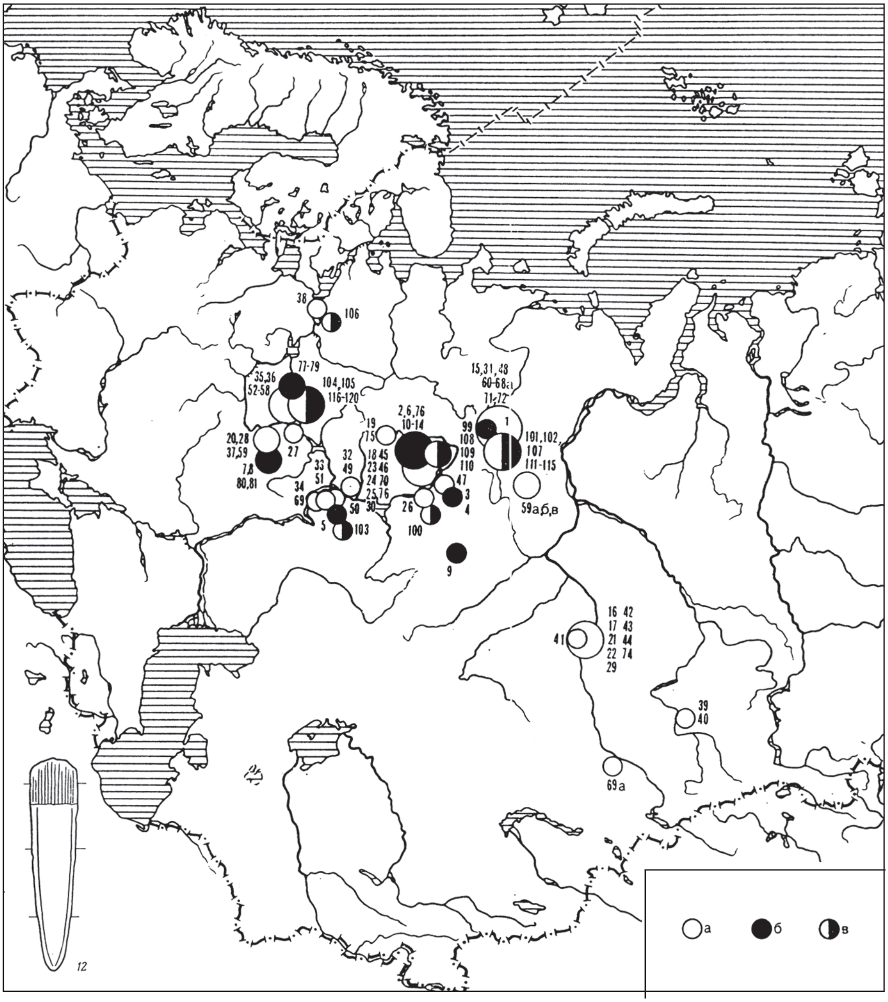
38
106
35,36
52-58
77-79
104,105
116-120
20,28
37,59
7,8
80,81
27
33
51
34
69
5
32
49
50
103
19
75
18 45
23 46
24 70
25 76
30
2,6,76
10-14
26
100
99
108
109
110
47
3
4
9
15,31,48
60-68a
71,72
1
101,102,
107
111-115
59а,б,в
41
16 42
17 43
21 44
22 74
29
39
40
69a
12
а
б
в

Figure 2.4 Distribution of Seima-Turbino daggers and moulds of western types (from Chernykh & Kuzminykh 1989: fig. 52).

it seems likely that bronze objects were made here already at this time. The fact that some of the axes in Finland seem to be of a local variant also leads one to conclude that local casting was performed within the Finnish region as well.

The later phase of metalwork in northern Fennoscandia, characterized by Ananino forms, also indicates local production (Bakka 1976; Huurre 1986; Baudou 1989; Forsberg 1996). The main find material during this phase consists of moulds of Ananino axes found throughout northern Fennoscandia (see Figure 2.6), supplemented by a few finds of axes. When comparing the Fennoscandian moulds with finished axes found in the core area of the Ananino culture, it is clear that the Fennoscandian variants are local copies of the ones found at cemeteries in the Volga-Kama area (see Figure 2.7). The pattern of distribution in Fennoscandia clearly shows a cluster with many moulds

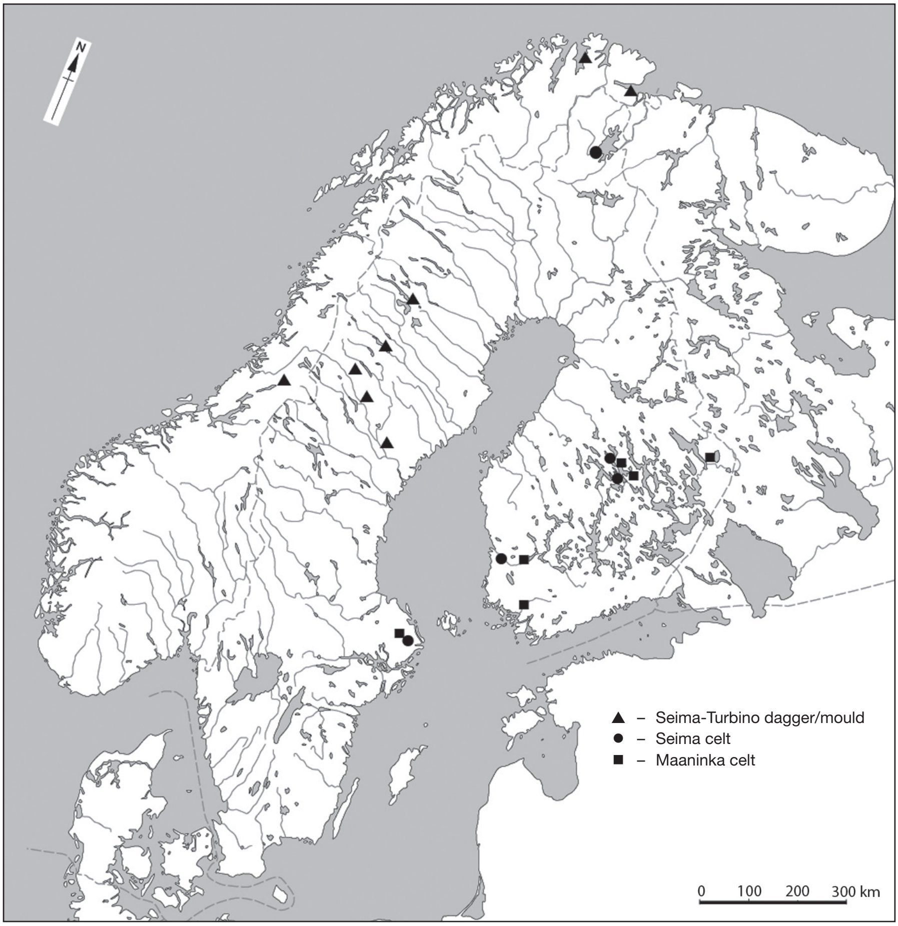

Figure 2.5 Distribution of Seima-Turbino items in northern Fennoscandia.

in northeastern Finland (Kainuu, northern Ostrobothnia and Lapland) and northern Norrland (Västerbotten and Norrbotten). The more southerly parts of Finland and Norrland are almost devoid of such finds. Instead, in southern Norrland there are finds of south Scandinavian bronzes, whereas in southern Finland there are axes of both the Mälar/Akozino type (Hjärtner-Holdar 1998; Lavento 2009), as well as south Scandinavian bronzes, mainly on the coast.

So it seems that in northern Sweden there is a difference in the distribution of metal finds from the second millennium BCE and the first millennium BCE. The metal finds connected with the Seima-Turbino complex occur in middle Norrland, with a similar distribution as that of the textile pottery from the same period. The Ananino metal finds have a more northern distribution, with a concentration in the same area as that of the northern group of pottery from 800–400 BCE. During the late part of the first millennium BCE, there is also evidence for early iron production connected with the northern hunter–gatherers (Mäkivuoti 1987; Kosmenko & Manjuhin 1999), roughly

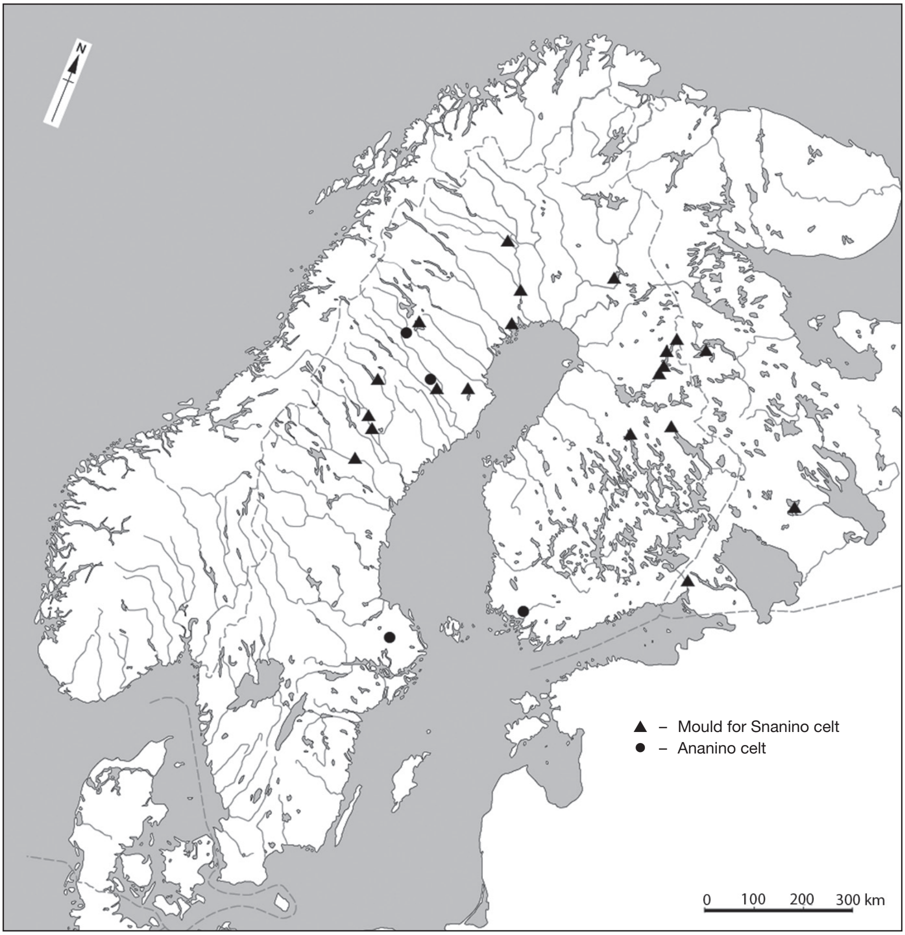

Figure 2.6 Distribution of Ananino celts and moulds in northern Fennoscandia.

coterminous with the massive spread of Kjelmøy/Sär2 wares. This is in itself not that surprising, as the metal finds can be taken as evidence of networks between northern Fennoscandia and the Ananino local societies in the Volga-Kama area. Iron production was very early in this area (Chernykh 1992; Koryakova & Epimakhov 2007).

There are abundant indications of metalworking on sites in the northern Fennoscandia area. Apart from the papers by Hulthén (1991) and Olsen (1991), this has hitherto not been sufficiently appreciated. These indications are of several kinds: slag, casting moulds, crucibles and raw materials associated with pyrotechnology such as asbestos. Whether the metalworking included smelting of ore, casting of bronze objects and smithying and hammering bronze objects or whether the metal was imported is subject to discussion. The majority of these indications are found on sites where most of the central technologies are represented – lithic production, pottery technology and metalwork. They mostly occur as central points in the hunter–gatherer territories in the western part of the forest plain of middle Norrland (Forsberg 2010a).

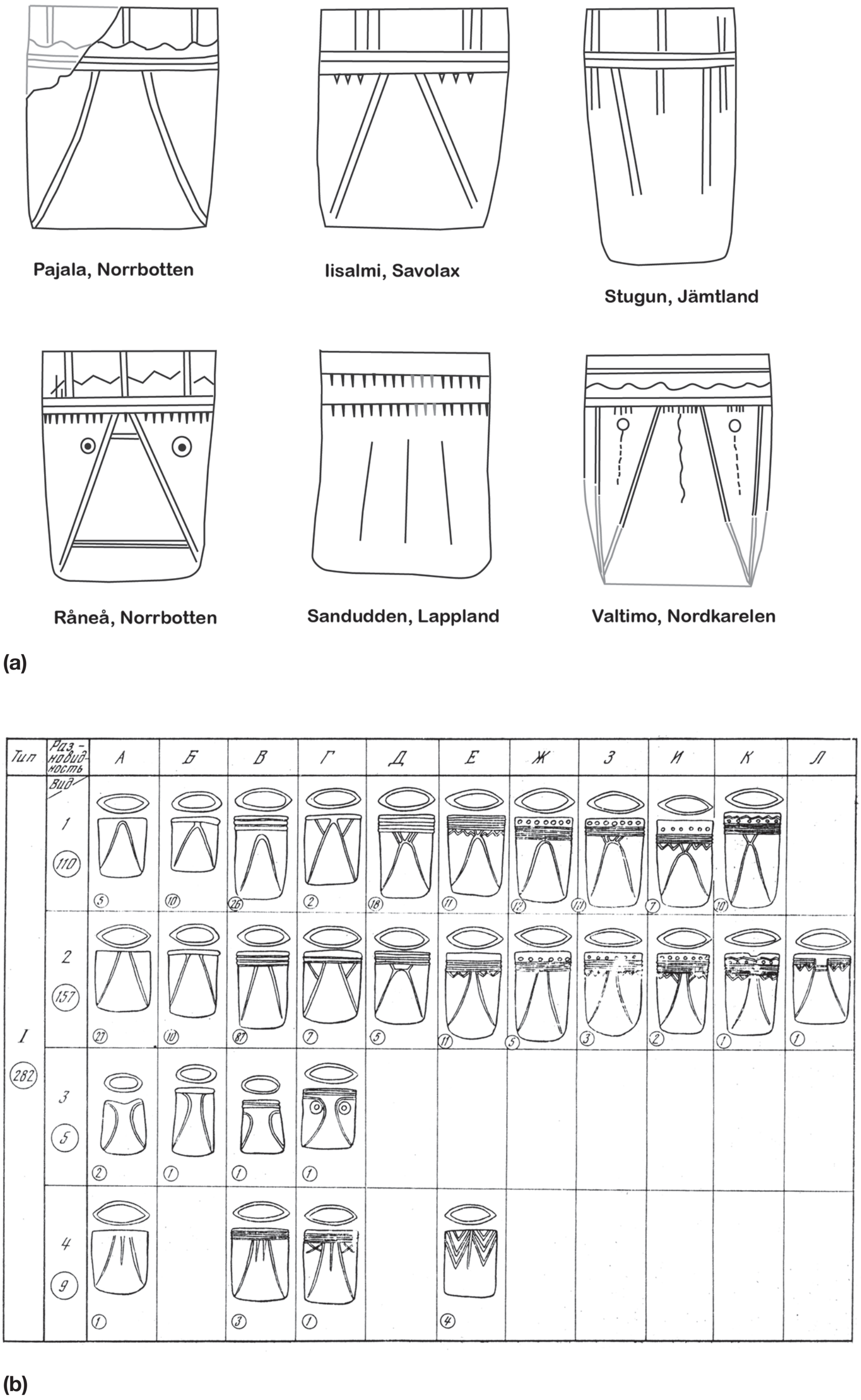
Pajala, Norrbotten
Iisalmi, Savolax
Stugun, Jämtland
Råneå, Norrbotten
Sandudden, Lappland
Valtimo, Nordkarelen
(a)
Тип
Разновидность
Вид
А
Б
В
Г
Д
Е
Ж
З
И
К
Л
I
282
1
110
2
157
3
5
4
9
(b)

Figure 2.7 (a) Local Ananino axes from northern Fennoscandia (drawn after moulds); (b) different types of Ananino axes (defined by Chernykh & Kuzminykh 1989)

A conspicuous fact is that production of asbestos pottery and indications of metalwork often go together on the same sites. Both these technologies focus on transforming materials from one state to another by the medium of fire, so both are in a sense pyro technologies. The close connection of these two technologies has been demonstrated in the emergence of early metalworking time and again in the Caucasus, Anatolia and the Carpathian area (Tringham 1971; Chernykh 1992). The close affinity between the distributions of pottery and metal during the two millennia, as well as parallel changes in distribution patterns throughout the first millennium, suggest that the two technologies were closely linked from their introduction up to the beginning of the Sámi Iron Age.

The networks documented by studying the three main technologies above clearly show that the hunter–gatherers of the northern forests were embedded in networks on different scales. The networks employed in the exchange and transport of lithic materials mainly show short-range distributions, some of which were clearly connected with settlement mobility (Forsberg 2010b). The introduction of pottery can be followed as a process of medium-range networking between certain nodes during the second millennium BCE, before being used throughout the entire annual round later in the first millennium BCE. Connections between these nodes and areas in northern Finland and northern Norway can also be glimpsed from the material evidence (Forsberg forthcoming). The evidence of long-range networks is most clear when analysing the metal objects. The connections with the forest zones of Finland and Russia are evident already from the beginning of the second millennium BCE and this is upheld throughout the first millennium BCE. At the same time, there is metal coming up from the south, mainly as finished objects. Thus, it would seem that we have a certain difference in the south–north and east–west networks. In one network, finished objects of southern origin are exchanged, in the other the eastern forms are locally produced on sites throughout the forest area. The picture is clearly much more complicated than what was stated in the introduction to this chapter (the smooth).

To sum up, the picture given in the introduction of egalitarian hunter–gatherers of the Mesolithic mould does not really hold up to scrutiny. Metal-using and metal-producing hunter–gatherers with exchange networks operating on different scales differ from this picture. Only a few of the local societies in the interior appear to have been active in appropriating the new technologies (pottery, metalworking) from the start of the second millennium BCE. This clearly points to differences in social strategies between local groups from different river systems.

A re-evaluation of the “northern branch” of the agro-pastoralists

Turning to the local societies along the Bothnian coast, these have so often been subsumed under the Nordic Bronze Age culture (Meinander 1954; Baudou 1968; Bakka 1976; Siiriäinen 1977; Kristiansen 1987a; Huurre 1979; Lavento 2005).

One of the main arguments for ascribing a south Scandinavian cultural identity to these societies along the Bothnian is the large number of burial cairns (Baudou 1968; Siiriäinen 1977; Kristiansen 1987a; Lavento 2005). Burial cairns occur throughout the Nordic area during the Bronze Age from southern Sweden up to the northern

Bothnian coast. They continue on the eastern coast to the Finnish Gulf. The cairns are taken as a sign that the same ideological and religious system dominated over a large area, enforcing the view of an ideological hegemony and used as a central argument in the interpretation of the coastal societies as having a Nordic cultural identity.

Another argument is the occurrence of bronzes of south Scandinavian types scattered along the Bothnian coast, which for Bakka (1976: plate 16) was a clear sign of the presence of the Nordic Bronze Age culture. A few of these are Mälar axes, however, and the affiliation of these to the Nordic Bronze Age culture is no longer so clear-cut (Meinander 1985; Chernykh & Kuzminykh 1989).

Recent work on these issues has indeed shown a more complicated picture (Bolin 1999; Forsberg 1999; Okkonen 2003; Ikäheimo 2005). Based on land uplift data, it has been argued that the cairn tradition may be at least as old in the north as in the south (Forsberg 1999; Okkonen 2003). This underlines that there are problems with upholding the view of a large-scale migration from the south or diffusion of agriculture during this phase.

One reason why the cairns and bronzes have become so central in the debate about the cultural affinity of the coastal settlement is the relatively poor state of knowledge about the settlement sites in this area. The state of research on the inland hunter–gatherers and their settlements is much better (Baudou 1992). While cairns and the distribution of stray finds have been fairly well known, few excavations of settlement sites along the coast have been done. The reasons for this might be the relative difficulty of discovery due to land uplift and overgrowing (former coastal sites now lie miles inland in the forests). Hydro-electrical projects in the inland during the 1950s and 1960s led to many extensive excavations, while the forests near the coast have had a relatively low exploitation pressure. Some new information has come to light in recent years however, due to research projects (Forsberg 1999) and railway building (Gustafsson & Spång 2007).

Several indications of local societies selectively adopting agro-pastoral practices emerge during this phase (Forsberg 1999; Lavento 2005). Indications of sheep/goat husbandry are known at several sites dating to the Early Bronze Age and possibly even earlier (Gustafsson 2007), and a few finds of macrofossils of barley might also suggest local cultivation, although there is also a possibility of transport from other areas. Other characteristics of these sites show more local traits, like the production of bifacial points and usage of quartz scrapers.

Even though there are indications of incipient agriculture and animal husbandry on some sites on the coast, the dominating economy along the coast clearly was oriented towards marine resources, mainly seals and fish. There seems to have been an intensification of sealing from the beginning of the Late Bronze Age up to the beginning of the Roman Iron Age. This is documented by the large fields of cooking pits in the Gulf of Bothnia investigated during the 1990s (Forsberg 1999; Okkonen 2003; Ikäheimo 2005). These fields suggest the production of seal oil on an almost “industrial” scale. It is quite clear that the production exceeded the needs of the local societies.

The sites from the Late Neolithic and Early Bronze Ages along the coast show a fair degree of variation. In the northernmost part of the Bothnian Gulf the practice of building oblong pit houses continues into the Early Bronze Age, as exemplified by the Fattenborg site (Forsberg 1999: 278). Seal hunting appears to have been a central part of the economy here. Further south, the picture is more complicated. In middle and south Västerbotten there are small sites with indications of oval or round huts with bifacial points and evidence of seal hunting near the outermost coast. Sites located in the innermost parts of bays also have indications of animal husbandry. In the Late Bronze Age there are a few larger sites with some agriculture and animal husbandry in retracted positions in the inner part of bays. There are also smaller sites of much the same type as in the Early Bronze Age (although not with clear hut floors). These have been excavated in northern Ångermanland and have been demonstrated to have been followed by the large farmsteads of the early Iron Age in some places (Ramqvist 1981; Lindqvist 1994). To sum up, different local societies intersecting each other existed along the coast, some dependent almost exclusively on marine resources and some with incipient agriculture and animal husbandry added. They form a mosaic of different economies and partly different material cultures. A similar claim can be made for the eastern part of the Bothnian Sea (Okkonen 2003; Ikäheimo 2005; Lavento 2009; Holmblad 2010).

A generalized model that sees these societies as coming in only two possible modes (Nordic or Arctic) will have large difficulties in explaining the variability. On some of the settlements, there are heaps of fire-cracked stones that have a clear similarity to middle Sweden (the occurrence of hearths underneath, stone constructions, etc.). There are also signs of contacts with the eastern shores of the Bothnian Sea. The house at Mårtenfäboda, Sweden, shows a clear similarity with the larger of the houses at the Rieskaronmäki and Vitmossen sites in Satakunta and Ostrobothnia parishes in west Finland (Kotivuori 1987). These sites all have stone-lined terraces surrounded by cleared areas as in Mårtenfäboda (Forsberg 1999). Cultural material that is commonly found on the hunter–gatherer sites in the inland is also found on sites on the coast – bifacial points and textile pottery, as well as Asbestos Ware (Lindqvist 1994; Forsberg 1999; Andersson & Sandén 2007). At the Mariehem site, for example, with its heaps of fire cracked stones and burial cairns, there is a manufacturing area for bifacial points, a type that also characterizes the inland sites. Bifacial points are also found in coastal graves (Forsberg 2010b).

From this it is evident that the picture given of the societies along the Bothnian coast as “areas with Nordic Bronze Age settlement” is not at all representative. Instead, we see a mosaic of local societies that are neither of “Arctic Bronze Age” or “Nordic Bronze Age” types. Rather, they seem to be local societies using various external stimuli, including material culture, according to their own local strategy.

Some alternatives to the dualistic, culture-historical model

There might be alternatives to the general dualistic cultural model depicted above. A general problem with this perspective is that it subsumes many cases under one concept or pattern. In such a top-down perspective variation and complexity are subordinated to the general pattern. An opposite perspective suggests that it is the everyday life of the individuals and their interactions that constitutes local society and thus forms the archaeological record. Such a bottom-up perspective would depart from studies of local societies, and thus open up for variation and complexity.

In archaeology, this perspective has mostly been represented by household archaeology (Wilk & Rathje 1982). By focusing on the smallest communal unit represented on archaeological sites, analyses are made relating household functions to variations in household size and organization. Recurrent phenomena studied are the production and distribution of resources, the transmission of property, as well as family reproduction (Allison 1999). The perspective covers the next analytical level up from the individual agency approach. A few attempts to analyse material from the area treated in this chapter have been conducted from such a perspective (e.g. Forsberg 2005, 2010b; Vaneeckhout 2009; Holmblad 2010; Vogel 2010), although it is still uncommon.

The term "local society" used in the present chapter denotes a perspective and an analytical level that lies somewhere between the household and the large culture-historical units (cultures or societies). It has been frequently used both in anthropology and history (Tönnies [1887] 2001; Weber 1922; Durkheim [1933] 1964; Williams 1985; Brow 1990; J. Asplund 1991; Herring 1998; Amit & Rapport 2002). The archaeology of communities is a term used for studies that also approach this level of analysis (Gerritsen 2004; Holmblad 2010). It suffers from many of the same problems as does the archaeology of local societies: not enough theoretical and methodological work has been done on the concepts involved. Although frequently used, few clear definitions of the concept of local society can be found. One definition that might be fruitful for archaeologists can be found in an article by Dyrvik (1981). Dyrvik argues that a local society is a geographically delimited settlement area with more frequent contacts between people within than outside the communal borders. The inhabitants know each other and have a variety of social relations with each other, as well as agreed norms for social behaviour exerting social control over each other. The area has similarities in resource base, production and material culture. It has joint religious, juridical and political primary institutions and there is an experience of concord among the inhabitants. Some attempts at studying this level in the area can be found (H. Asplund 2008; Holmblad 2010).

A theoretical perspective that has been suggested for accommodating local societies that do not fit the broad cultural categories (for example agricultural versus hunter–gatherer, Arctic versus Nordic) centres on the concept of hybridization (cf. van Dommelen 1997; Falck 2003; Bergstøl 2004, 2008; Counts 2008). Hybrid material culture results from the adoption, modification or fusing of elements of style, manufacture, materials, technology or meaning from distinct intellectual and cultural legacies. Issues involving hybrid material culture reach deep into prehistory and involve the origin and modification of style and group boundaries, technology transfer, transition of concepts across media and the adoption of new raw materials. Hybridization is also a key aspect of the concept of ethnogenesis, where new material culture and patterns of object use mirror the emergence of new cultural identities in contexts of culture contact, colonialism and creolization. The concept has its root in postcolonial theory, theoretical perspectives emerging as a way to address the problems of global culture and the relationships between local societies and global forces. Hybridization is however just one of several concepts of this theory that might be useful as a corrective to the dualistic model.

A central point in postcolonial theory is a critique of binarism and an associated focus on the dismantling of centre/margin models of culture (Harding & Narayan 2000; Mignolo 2000; Smyth 2000; Sarkowsky 2002; Brennan 2005; Russell 2006). As such, this perspective shares much of the same unwillingness to oversimplify relations between societies as is expressed in the present chapter. It also acknowledges the existence of a variety of cultures in order to avoid universal prescriptive cultural definitions.

Hybridization as defined in postcolonial theory is a process that refers to the creation of new transcultural forms within the contact zone produced by colonization (Bhabha 1994). It has however been applied much more loosely in archaeology, as a mix of cultural traditions. This actually comes nearer to what is termed creolization in postcolonial theory, rather than hybridization (Young 1995; Bergstøl 2004). However, there would seem to be some problems in applying this perspective to the prehistoric situation discussed here. Postcolonial theory studies the interface between a dominating, colonial force and local societies, and this perspective might also be embedded in its use in archaeology. One could really question whether the relationships in Bronze Age Scandinavia were of such a lopsided kind. It is suggested here that a third concept used in postcolonial theory, syncretism, used in religious studies but not applied as frequently in archaeology, might be more appropriate. It is used to avoid the problems of hybridity identifying a fusion of two (and mostly only two) distinct traditions to create a new totality. The term does not prescribe the number of traditions involved; nor does it hold the power perspective constant.

The varying aspects of the complicated ways in which relations between different societies and cultural traditions are played out are studied in postcolonial theory. Transculturation, mimicry and various constellations of hegemony and subalterneity might be aspects worth considering also in prehistoric situations (Gramsci [1929] 1988; Bhabha 1984). It would be essential to consider the aspects of hegemony and subalternity from different perspectives, as people embedded in different social and power contexts view these aspects and relations differently.

As is evident from this discussion, approaches exist that try to cover the gap between the knowledgeable individual agent so frequently appearing in post-processual archaeology and the large-scale cultures and sociocultural systems of the culture-historical and processual archaeologies. They seem to cover three distinct social/spatial levels: the household, small-scale social groupings (house societies, local groups), and larger social groups (communities, local societies). It is hoped that future archaeological analyses performed at these levels might provide knowledge about society at different levels and areas in the region discussed. This might then serve as a backdrop to assess the question of how culture is being actively used, not passively accepted.

It is clear that local societies, communities and households still run a risk of being atomistic and particularistic in the sense that they might be viewed as bounded and closed units of study. The humans involved seem to pursue their lives within these local *insulæ*. We know, however, that people have been travelling and moving about, exchanging ideas and creating the super-regional patterns of similarities and "influences" that we can see in prehistory, and that, surely, led to the top-down viewpoints expressed in culture-historical archaeology in the first place. How might we combine this with the local, bottom-up perspectives suggested above?

A paradigm that does *not* focus on coherent groups or territories, but rather on direct relations between people and groups of people, is the network. It has been used a great deal in sociology where it emerged as social network analysis (Scott 1991). This was first a formal methodology geared towards describing and quantifying patterns of relations in the modern world. In the 1990s another theoretical movement in sociology based on the network principle emerged. The actor network theory widened the interest not only in persons and organizations, but included all possible actors in an empirically studied situation, human and non-human (Law & Hassard 1999; Latour 2005).

What is important for archaeologists in this theory is that it enables us to partly break free from the paradigm of bounded entities such as cultures, societies and coherent groups. At the same time it is not inherently incompatible with these concepts; it just moves the analytical focus elsewhere. A central tenet is that people in prehistory have always been mobile, travelling shorter or longer distances in order to fulfil individual and/or collective strategies. This would be especially true for hunter–fisher populations dispersed in the vast northern areas. It is important, however, not to make the logical mistake of thinking that they could move unhindered in all directions; rather, they followed certain routes that were easier to traverse. These routes were determined not only by nature, but as much by social considerations. Therefore one would predict that movements of people and hence also of cultural materials followed such routes. These could perhaps be called "pipelines" along which more intense movement occurred. It is also clear that people were not evenly spread out across the vast boreal forest, but that they were concentrated in certain areas and settlements in different seasons. Some areas with denser settlement seem to emerge in the Late Stone Age and they continue to be important in the Early Metal Age. Such places where human and social resources were concentrated might then be called "nodes" in the network. By studying the introduction and acceptance of technologies and the role of the social networks involved, one vehicle is suggested for getting closer to the actors and social units as well as the interaction at different levels. It is suggested that such a perspective has the potential to combine the different analytical levels discussed above.

Conclusion

By focusing on bounded culture as an explanatory factor, researchers created a picture of two large cultural blocs, each with a different culture: Arctic and Nordic Bronze Age cultures. Even when economy and resource use became a central point of study during the 1970s and 1980s, there was little change as the two blocs were still seen as two different economies on different levels of social evolution: hunter–gatherers and farmers. The phenomena and viewpoints leading up to this binary model can be seen as limitations that must be overcome. Some of these can be said to be concepts of culture rooted in normative cultural theory; a too general, top-down perspective, where local societies are seen as epiphenomena; modern national borders leading to perspectives situated in nationalistic archaeology; and too simplified views on life-ways. It is when the concepts of local society and societal variation on smaller geographical scales are introduced that an alternative picture first starts to emerge.

The societies along the Bothnian coasts were labelled as settlements of Nordic Bronze Age culture in earlier research. It has recently been demonstrated that this is an oversimplification. It is probably more to the point to describe them as a mosaic of local societies. These have had different economic, social and cultural strategies explaining the curious mix of cultural traits that some exhibit. This mix consists of material culture from both "Arctic" and "Nordic" areas. The economies of the coastal societies also seem to have varied, some relying completely on marine resources, while others also include animal husbandry and even agriculture. It seems as though their positioning between inland hunter–gatherers and agro-pastoralist societies to the south and east has influenced their social strategies so that they could have functioned as middlemen in some of the more far-ranging networks.

The hunter–gatherers have been shown in the discussion above to differ markedly from the picture of them as small bands being targeted for asymmetric exchange by stronger and more "advanced" societies. They were apparently quite aware of the potential for exchange relations with other societies. One would even wonder about the radical change in economy, mobility pattern and material culture in the later part of the third millennium BCE – could this be a deliberate change, the result of a conscious social strategy on the part of some hunter–gatherers (cf. Olsen 1988)? It has been shown that the adoption of pottery production and metalworking was at first introduced only at a limited number of places in a specific part of the forest area. This would point towards a difference between various social units and the social strategies they employed.

To sum up, instead of the smooth (i.e. the dualistic perspective described in the introduction), we can make these conclusions when examining the rough as: (i) the existence of many varying local societies in the inland and along the coasts, not only two cultural blocs; (ii) a palimpsest of material culture and not cohesive areas with normative culture; (iii) frequent interaction on several different scales and not only in one direction; (iv) social networks functioning during long time spans; and (v) the importance of acknowledging the existence of conscious social strategies in all participants in the exchange system.

Focusing on local societies and variation has been shown to be a fruitful perspective and a correction of dualistic, top-down models: the importance of a perspective of culture as something that is not bounded, normative and passive, or something that people have, but rather something they actively employ in various social strategies.

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3

Expressing identity through ritual in the Early Bronze Age

Mette Roesgaard Hansen

Introduction

How do we identify regional or local identity displayed in prehistoric societies? This question is not easily answered, because specific forms of identification do not occur in all contexts, but in different levels and with varying expressions (Bloch 1988: 18; Barth 1996: 77). This means that individuals are involved in interaction at many levels and as members of many different kinds of social groupings (McGuire 1983: 118; Beck 1995: 173; O'Shea 1996: 10ff.; Sørensen 1997: 94; Chapman 2000: 172) – for example, a man from one family, one household, a society, a group of men and a profession. Consequently, identity must be seen through a theoretical pluralism, rather than from only one perspective (Prescott 1995: 28; Meskell 2001: 188). As a result, identity is contextual and related to specific events and interaction (Fowler 2004: 3). This chapter explores human action and context in relation to the understanding of prehistoric identities, and the creation of identity in a local area (the small region of Thy in the northwestern part of Denmark, west of the Limfjord) through material culture from Early Bronze Age burials. This specific context consists of 255 closed burial finds all dated to the Early Bronze Age, primarily from periods II and III.

Ritual action as identity

Since the work of Pierre Bourdieu was implemented in archaeological studies, we have been conscious of action as a central element in the production and reproduction of social structures, and of course the creation of identity (Bourdieu 1977). In relation to the study of burial ritual in prehistory the actions become central, as the bereaved place things on and by the deceased, and thereby assign meaning to the body of the deceased (Lillehammer 1987; Meskell 2001; Bourdieu 1998). The prehistoric burial offers in this respect a chance to observe repeated behaviour of the living, which ultimately derives from concepts relating to the adequate and appropriate treatment of the dead (O'Shea 1996: 10). The artefacts and the deceased are not placed haphazardly in the grave, but rather as a result of conscious and intentional action (O'Shea 1984: 24). The actions of the bereaved are therefore part of a more or less tangible act, where the society's ideas about the identity and affiliations of the deceased are enacted through ritual.

An individual in a given prehistoric context can be seen as having an identity or affiliations composed of multiple identities, where a person can be considered in terms of, for example, sex/gender, family, clan, ethnic group, function and ego. All these identities will be incorporated into a person's identity, while that person interacts through these identities depending on the situation (McGuire 1983: 117). The identity of the deceased is in this way a complex compound shaped by the culture or society of which he or she is a member, but also as part of a more specific or personal identity, which can occur in specific contexts and therefore cannot be defined in all contexts (McGuire 1983: 118; Bloch 1988: 18). It is here that we must search for prehistoric identities – not as a final form of being in the world, but as part of a strategy through which individuals in certain contexts are defined by the group and vice versa.

Ritual variations between contemporary burials imply that the ritual itself can be perceived as a distinct category of praxis, which is not similar in all cultures or societies. Thus there will be different ways of expressing unique aspects of ritual character in a society or group of people (Bourdieu 1977: 72; O'Shea 1996: 10; Brück 1999: 314). Regional or local identity is not only connected to the individual but to interpersonal connections (Brück 2004), where groups of people may differentiate themselves from others by discrete aspects of group behaviour marked in the ritual act (Hodder 1982; O'Shea 1996: 10; Jones 1997, 2007). At the same time we might ask why burial rituals are useful as a background for defining grouped behaviour and identity. It is a widespread perception that rituals must be seen as especially useful in the investigation of the spread of human interaction, because technology is more likely to cross cultural borders than the ritual act itself (Hodder 1982: 84). Symbolism is the language of rituals, meaning that symbols in the context of rituals are equivalent to a specific cultural grammar (Beck 1995: 170). The ritual as action is therefore more specific for a single group than the artefact itself.

In the view that human action can be used as background for studies of identity, it is beneficial to study similarities and differences in the human habitus and context (O'Shea 1996: 10; Jones 1997: 126, 2007: 49). In doing so the ritual act itself becomes the centre of attention, and thereby enables the mapping of grouped behaviour as identity through similarity and differences (i.e. the ritual variation). Groupings of identity are not only based on similarities and differences in the material culture, but also on similarities and differences in human action and the contexts in which this action is performed.

As described above, identity formation is present at many levels of interaction, from individuals to entire societies. Through variation in the grave ritual, the individual is expressed and the group highlighted; for example, a very heterogeneous burial ritual gives the impression of a group characterized by individuals compared with more homogeneous behaviour in the burial ritual, where the group is increasingly marked by the ritual. This assumption comes from the view that groups without interaction with other groups from the outside will show ethnic heterogeneity based on a greater degree of marking identity within and among the members of the group. In contrast, groups in contact with foreign groups will appear as more uniform, as they gather around a common identity formed by exogenous interaction (Hodder 1982: 5; Olsen 1985: 27; Barth 1996: 80). The establishment of the group with either internal or external relationships is then transferred to the analysis of the local context through the variation in the burial ritual. However, this will require a fundamental acceptance of the burial ritual as a marker of identity in living communities, and thereby a reading of internal grave structures as the presence of community or values oriented towards the individual.

The physical relationship between body and artefacts

Earlier attempts to apply similar perspectives on Danish Bronze Age material have been few, and for that reason the specific method used is a fusion of ideas gathered from regional (Asingh & Rasmussen 1989; Hornstrup 1997) and gender research (Lillehammer 1987; Sørensen 1992, 1997; Bergerbrant 2007). The primary interest here is the interior relation between artefacts, body and cist. This inter-relationship is examined with the expectation of a ritual variation seen in this physical relationship between body and object, and consequently an opportunity to identify homogeneous and heterogeneous expressions in the relationships between group and individual.

The physical identity was significant in the Early Bronze Age in Thy. To a great extent, the graves reflect whole individuals as the deceased have been placed in body-length stone cists, a tradition particularly frequent in Thy in the Early Bronze Age (Rasmussen 1993: 140). The use of body length cists in the Early Bronze Age, for both inhumed and cremated individuals, symbolizes a preservation of the bodily expression, which is also symbolized by the often unburned artefacts placed in cremation graves. The location of the grave goods in the stone cists from Thy can be assessed based on the shape of the cist. Most cists have a broad end and a narrow end, marking the head and the foot, respectively. In this way it is possible to determine the direction and placement of the deceased, and also on which side or at which end the artefacts were placed. In a male grave from Villerslev in Thy (see Figure 3.1) there is a clear difference between the head and foot of the cist. In this way it is possible to establish that the sword was placed to the left of the deceased, and that swords in male graves are always placed with the grip pointing towards the head of the deceased.

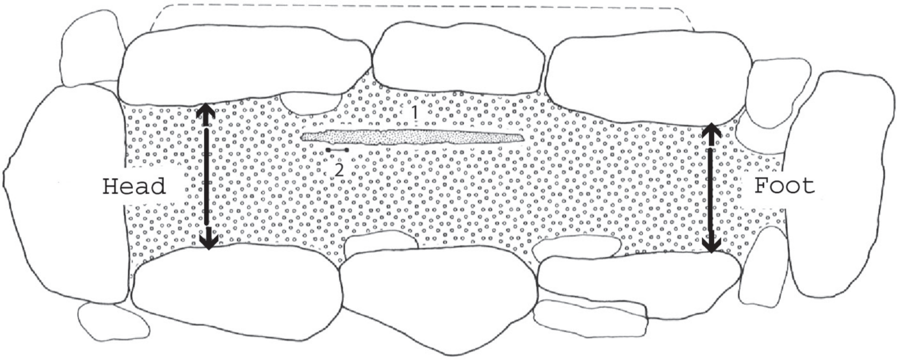

Figure 3.1 A male grave in a body-length stone cist from Villerslev, with a clear difference between the head and foot of the cist. The sword is here seen placed on the left of the deceased.

In mapping ritual variation it is important to distinguish between two aspects of physical variation here referred to as the *direct* and the *correct* location (Hansen 2007). The direct location is the physical distance between artefacts and body. Objects located away from or on the deceased can be viewed either as grave goods or grave gifts (Lillehammer 1987: 86); however, it is important to look at the object type before such a relationship between artefact and deceased is interpreted. Pottery is not worn on the body in real life, and it is perhaps only natural that this is located away from the deceased, while objects that are perceived as ornaments or other bodily decoration are of interest if they are placed away from the deceased, as this may symbolize a clear separation of artefact and body. A personal item located away from the body might be considered a grave gift provided that it has not moved due to interference or animal activity.

The second aspect is the location of artefacts in relation to the deceased's body, referred to here as the correct location. The bodily correct location of artefacts is when the artefacts in the cist reflect the body (e.g. the arm rings are placed where the arms would have been, and the belt plate on the pelvis). In this manner the artefacts are used to recreate a cremated individual in the way they are placed inside the cist. The bodily correct placement of artefacts is closely associated with the direct location but differs significantly in that the artefacts may not be placed correctly on the dead; this is especially significant in cremations placed in long cists.

An example of the relation between body and the ritual act is clearly illustrated in a female burial from Tilsted (Figure 3.2). The woman was cremated and her ashes placed in a long stone cist, here seen as the grey area on the left side of the grave, and the accompanying artefacts reconstruct the buried individual, as the artefacts are found where they were likely to have been worn in real life. The arm rings are placed by the arms and the belt box by the pelvis. To elaborate the point, the careful positioning of the artefacts in the cist created a fictive woman. It must be pointed out that no inhumed bones or remains from any textiles have been found in the grave, although it is evident that the arm rings and the belt box were placed correctly, and thus the individual was reconstructed through the placement of artefacts.

Trends in Thy

Two interesting trends were visible in the analysis of the 255 closed-burial finds from Thy dated to the Early Bronze Age. One is the more varied physical ritual connected to female burials, and the other a more homogeneous and geographically grouped ritual behaviour connected to male burials. The degree of ritual variation connected to women is seen especially in cremation graves, a burial form primarily connected to the female segment of the Early Bronze Age population in Thy. Variation here is expressed both in the placement of artefacts in the grave, and in the treatment of the dead through the ritual act. Two contrasting examples of bodily variation in female burials are seen in the grave from Tilsted in northern Thy (Figure 3.2) and in a grave from Damsgård in central Thy (Figure 3.3). The Damsgård burial indicates a high degree of fragmentation of the deceased. Bronze artefacts are normally unburned in cremation graves, but here the artefacts were burned with the deceased, and bones and artefacts

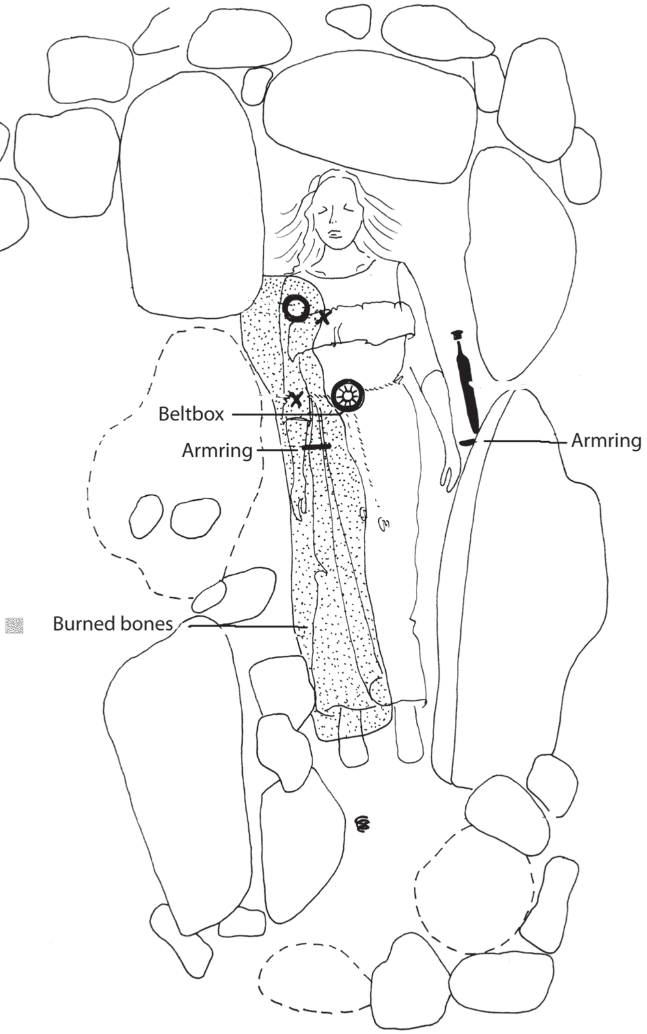

Figure 3.2 A cremated woman from Tilsted seen with the artefacts placed in the grave and with a reconstructed woman placed inside the cist to illustrate the bodily correct placing of artefacts.

were thereafter dispersed. Bones and artefacts from the same individual were found both in a smaller stone cist and in the cremation pit just north of the cist (Olsen & Bech 1996). In the Damsgård burial we therefore see a clear tendency towards a deliberate deconstruction of the individual in contrast to the grave from Tilsted, which, as argued above, shows a completely different integrity connected to a cremated individual.

Compared with those of women, the male burials demonstrate a more homogeneous, grouped ritualized behaviour in the relationship between objects and body. Furthermore, there is a clear tendency towards men being buried in long stone cists whether they are cremated or not. The ritual connected to male burials therefore indicates a higher degree of bodily integrity than the female burials. This tendency is not

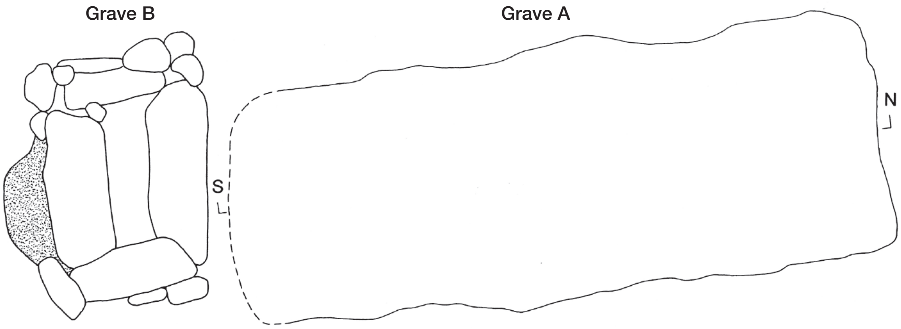

Figure 3.3 Woman's grave from Damsgård with the smaller stone cist placed just south of the larger cremation pit (Aner *et al*. 2001).

only visible in the treatment of the body but also in the placement of artefacts in the cist. In connection with the cremation tradition introduced in male graves in period III, we see a small amount of men buried in smaller stone cists with an internal length of approximately one metre. The smaller cists are also used for women, but the marked difference between men and women in smaller cists is how the artefacts are placed.

Just as the female burials show a large degree of variety in the way the artefacts are dispersed inside the cist, the placement of artefacts in male burials shows a higher degree of bodily awareness. For the male segment, the artefacts are placed identically in the smaller cists and body length cists. The artefacts in male graves are placed in three different positions: the sword is placed either to the left, the right or on the chest of the deceased (see Figure 3.4). Contrary to the female burials, all male burials have the position of the sword in common, which means that even in cremation graves the sword is placed to the left, the right or in the centre of the cist.

The male burials are therefore perceived as more homogeneous in their bodily expression than the female burials. The male burials are not only more homogeneous, but they also appear to have a larger degree of ritualized grouped behaviour when the three different positions of the sword are viewed geographically.

Geographical groupings of ritual behaviour

The location of the sword in male burials indicates a tendency towards a geographically grouped behaviour. Figure 3.5 shows the geographical distribution of the three different placements of swords, and clear groupings appear. In northern Thy, the burials primarily contain swords placed on the chest, but burials with the sword placed on the right side of the deceased also occur in this area. In central Thy there is a clear grouping of burials with the sword placed to the left of the deceased, and in southern Thy, the physical placement of the sword seems more mixed as the sword is placed left, right and centre in this area. A placement of the sword to the left of the deceased is in a bodily sense the correct way of placing the sword, as a right-handed person will draw his sword from the left side. From a bodily perspective it is likely that the swords placed

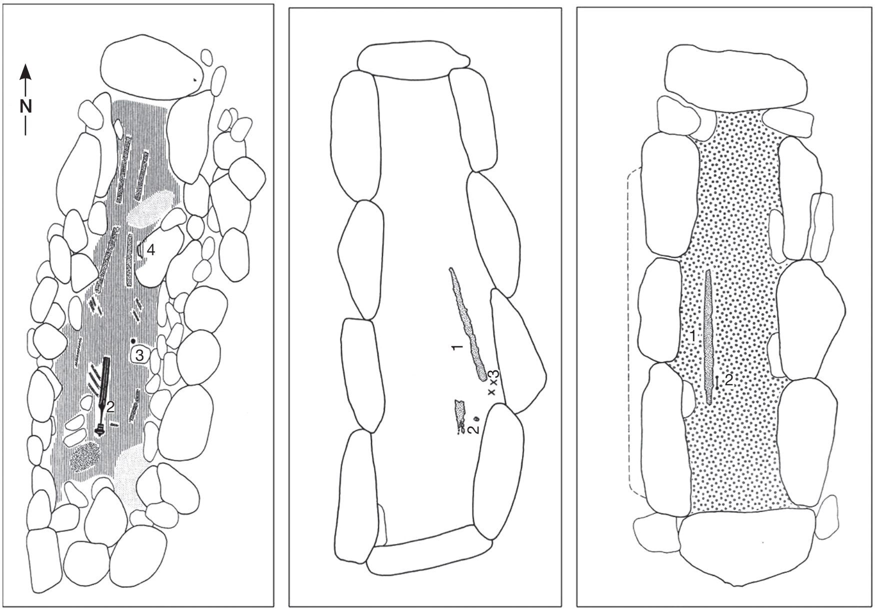

Figure 3.4 Three examples of the placement of swords in male graves from Thy. With the foot of the cists in the bottom of the picture the swords are here seen placed to the left, the right and on the chest of the deceased (Aner *et al*. 2001).

to the right of the deceased indicate left-handed men, as the number of burials with this placement of the sword is scarce compared with burials where the sword is placed to the left. There is a vague over-representation of these graves in northern and southern Thy.

The clear grouping of ritualized behavioural patterns in male graves in Thy is not only interesting in terms of swords, but also has relevance for graves containing daggers. It is often impossible to establish the sex of the deceased in graves that only contain daggers, because both male and female burials are often known to contain a dagger. In Thy, it was possible to determine the sex of the deceased from the placing of the dagger, which clearly followed the placement of swords. An example is from northern Thy, where a certain segment of the burials with daggers and no sword could be connected to the male sphere, as the daggers were placed on the chest of the deceased and this was not observed in the female graves containing a dagger in this area.

The geographical clustering of the physical ritual in male burials can also be found in other aspects of the material culture in Thy. However, it is imperative to find this parallel in a spread of human action and not just in the dispersion of specific object types. The deposition of hoards can be seen as a human ritual act, and is therefore relevant to the creation of identity in separate contexts. Hoards are found in three different contexts in Thy: (i) in wetlands, (ii) in ear barrows and (iii) in the graves. Hoarding has been suggested for graves with extra sets of jewellery (Asingh & Rasmussen 1989; Hornstrup 1998).

The interesting aspect here is that the three different types of hoarding occur in demarcated geographical areas similar to the male grouping of bodily praxis (see

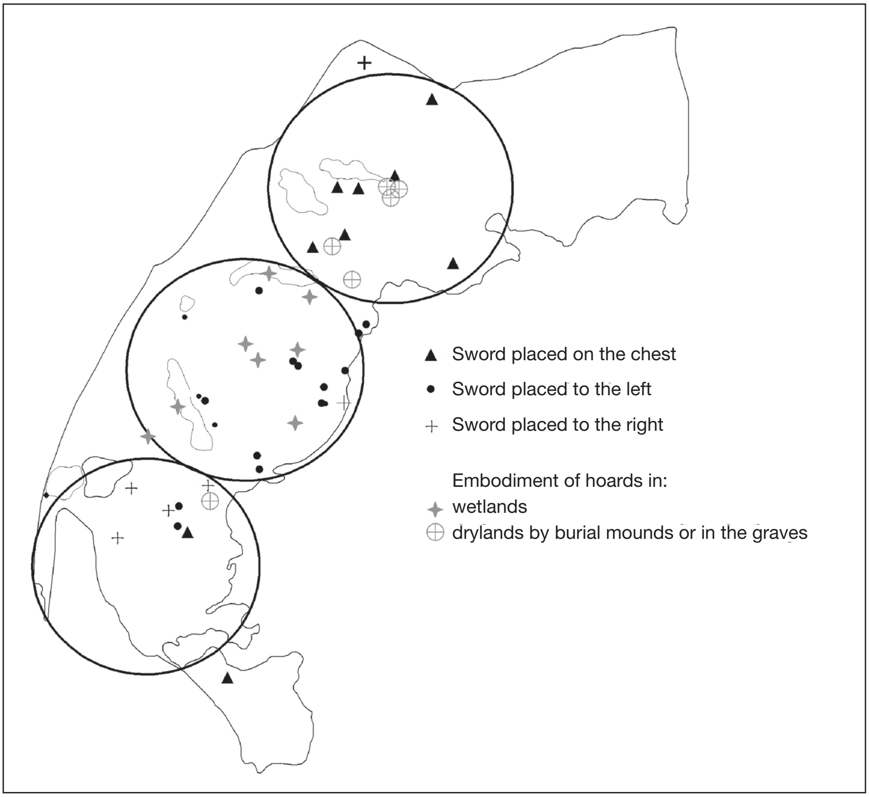
▲ Sword placed on the chest
● Sword placed to the left
+ Sword placed to the right
Embodiment of hoards in:
wetlands
drylands by burial mounds or in the graves

Figure 3.5 A map of Thy showing the spread of bodily traditions in male graves in relation to the placing of the sword and the spread of the different contexts in which hoards are found.

Figure 3.5). All hoards from wetlands are found within the defined geographical area equivalent to the area where the men have the sword to their left. This type of hoarding occurs nowhere else in Thy. Similarly, the hoards in burials and near barrows are only known from northern and southern Thy, corresponding to the placement of swords primarily on the chest and to the right of the deceased. This praxis is not known from central Thy, where the swords are placed to the left. Thus there is a distinct overlap between the placement of swords in male graves and different contexts for the hoards.

Interaction and formation of identity between individuals and groups

Overall, three trends can be highlighted:

1 Women exhibit heterogeneous trends in the grave ritual in period III, both in relation to the position of objects and in the diversity of artefacts found in the grave.

2 Males exhibit homogeneous grouped trends in the grave material in period III, both in relation to the physical position of artefacts and the diversity of objects found in the grave.
3 The different groupings of male burials can be associated with a specific context for the hoards in separate areas.

The heterogeneous grave ritual among women implies that the ritual act connected to the burial of an individual women differs from the ritual act performed at other women's burials. In contrast, male burials express a more uniform ritual practice. The act performed at the burial of each man corresponds to the ritual act performed at the burials of other men in a given context. How should we understand this basic difference between men and women in the interpretation of identity? If the grave ritual is viewed as a separate context-based action, where levels of identity are expressed through the interaction between groups and individuals, the ritual variation can be seen as an expression or marker of identity in the Early Bronze Age. For example, a very heterogeneous grave ritual seems more characterized by individuals as compared with a more homogeneous grave ritual, where groups are marked in a common identity. Groups who have contact with others from the outside are recognized as more uniform, as they gather around a common identity strengthened by external interaction. In contrast, groups with no interaction with other groups reject heterogeneity because they define identity within and between group members to a higher degree (Hodder 1982; Olsen 1985; Barth 1996). This means that individuals, by meeting with other groups or cultures that are different from their own, are made aware of any differences between "us" and "the others". Consequently, a group's identity will to a certain extent be defined from the awareness that there are some who express themselves in a different manner culturally, ritually or socially. Groups that do not interact with strangers, will primarily define their own identity within the group, and will not necessarily be aware of a specific group identity. It is here in the interaction of the individual and the group that we have an opportunity to interpret these different ritual practices between men and women.

Women's heterogeneous ritual expression in Thy can generally be seen as an identity marked by diversity and variation. This trend was visible in the position of artefacts in the grave, supported by the combination and diversity of objects associated with female burials. Consequently, women exhibit a high level of individual-based identity where a specific group identity is absent in the ritual act. It may however be argued that diversity defines a different form of group identity; on the other hand the variation marks a conscious creation of identity for women, which might be sought in a different context and habitus than for the male segment.

The men in Thy have a higher degree of similarity and grouping integrated into the ritual act. This grouping is clearly seen in the physical analysis supported by the location of the sword, as well as the combination of objects and the diversity of artefacts in male burials. In terms of differences and similarities, it is marked that women increasingly have an identity based on individual differences associated with small local units, whereas men show an identity based on a higher degree of clustering in larger geographic areas. The more individual-based female identity and the more group-oriented male identity can, as already mentioned, be explained through different contexts of interaction. The female diversity is therefore interpreted as an expression of identity that reflects self-expression to a higher degree. This does not mean that women should be seen as more independent or individual than men, but rather that the creation of women's identities can be found in more local contexts of action and interaction. I see it as an identity that increasingly refers to domestic interaction, where each woman's frame of reference is in networks that are smaller than male networks.

This claim may be rooted in gender studies of dress and regional studies of the artefact combinations from the Early Bronze Age (Sørensen 1997; Asingh & Rasmussen 1989). For example, studies show that women's clothing in the middle Bronze Age express a varied practice in how the dress was worn (Sørensen 1997: 99). A similar variation did not occur in male clothing (*ibid.*). The trend is likewise reflected in the regional analysis of metal objects in which objects associated with women in period III have a high degree of diversity (Asingh & Rasmussen 1989: 81). At Thy, it has been pointed out that a similar difference in production related to the individual farm in the Bronze Age existed in periods II and III. An internal specialization and differentiation between the individual farms consisted of, for example, flint work, agricultural structures and livestock (Kristiansen 1998: 287).

The significant degree of variation in women's graves can therefore be seen as an identity based on more domestic and local values attached to the household and farm. On the other hand the more homogeneous grouped male ritual practice indicates that men had an identity that probably was rooted in greater and more extensive networks than women – networks which were capable of organizing the male ritual expression through the interaction between men.

Based on the above-mentioned tendencies it can therefore be argued that the identity of women is symbolically linked to the local and the domestic through the burial ritual. This argument does not necessarily deny that a relation of power exists between the sexes, but points out that the difference between the sexes in the burial rituals may be explained in differentiated contexts of interaction. There is no doubt that the contacts and networks were significant in the earlier Bronze Age, and that men had this network embedded in their identity through a higher degree of clustering and unity reflected in the male ritual. It is therefore likely that men expressed other motives in the formation of identity than women, and that these motives are possible to view through separated contexts.

Two local contexts for ritualized or real identities

Based on the physical analysis, it can be reasoned that a diverse but grouped burial praxis existed in male burials throughout the Early Bronze Age in Thy, where the location of the sword on the left, the right or on the chest is seen as a local grouped practice (Figure 3.5). It must be presumed that men carried their swords on their left, the side from where one naturally draws the sword, if one is right-handed. The location of the sword to the left is clearly concentrated in central Thy, with a few instances in southern Thy (Figure 3.5). Here, an authentic practice is followed in the grave ritual, as the placement of the sword is not converted through ritual, but copies an existing lived practice. This practice is in sharp contrast to a different location of the sword mainly in northern and partly in southern Thy, where swords and daggers are placed on either the right side or on the chest of the deceased. The placement of the sword on the right side would be natural for a left-handed man. However, it is noteworthy that there should be a predominance of left-handed men in the two areas described here. The amount of burials with the sword placed to the right is low, and a left-handed practice explained by natural causes can therefore not be rejected.

The location of the sword on the chest is in no way an authentic placement of the sword, which must have been worn at the hip. Rather, it is a ritualized practice where mainly the north, and partly southern Thy, differ from central Thy in the ritual placement of the sword and daggers. It is therefore likely that there existed a different ritualized tradition of the deceased in northern and partly in southern Thy compared with central Thy. This ritualization of the deceased is likewise visible in dissimilar contexts for hoards in these demarcated areas. In the areas where a ritual placement of the sword exists there are hoards connected to the burial mound or the grave, a praxis visible in the deposition of objects as gold rings, gold boats near the barrows, and extra jewellery sets in the graves.

As a contrast to the ritualized praxis in northern and (partly) southern Thy, there exists a more natural placement of the sword in central Thy linked to hoards located in wetlands. This practice is not documented in the other two areas. Consequently, central Thy is interpreted as an area where the deceased or the burial mound is ritualized to a lesser extent whereas the wetlands and the landscape are ritualized to a larger extent. It is my opinion that these areas present different traditions and thereby also divergent perceptions of the ritual norm. But how should these two diverse traditions be seen in relation to identity formation for the individual and the group in the Early Bronze Age in Thy?

Interestingly, local or social identities are integrated in the burial and the landscape through the ritual action, an action which was concealed from the outside world after it had been performed. The burial is covered by a mound and hoards in the wetlands are lost to the outside world under metres of water. Further, most men probably wore their sword on the left hip, and have therefore been bodily alike in real life, a theory which is well in line with the general spread of similar object types throughout Thy (Hornstrup 1998: 31). This means that the groups defined here cannot necessarily be transferred directly to the living world. The local grouping was probably first marked in the grave, and can therefore be seen as a form of ritualized identity marked by local territorial contexts. So in the male burials we have an identity where strategies for connection or exclusion are found at several levels. Unity and semblance were sought in the living world, and the differences and separation were marked in death. It is possible that in northern and southern Thy there was a need to mark a felt or a subjective identity in the grave, but that in real life men sought a unity with a wider area in terms of trade, communication and exchange.

Cultural or ritual borders exist even if there is movement and communication across them. Groupings of the archaeological material should therefore not be construed as a lack of mobility, contact and information, but as containing the social processes of exclusion and inclusion. Hence discrete categories are maintained even under changed participation or membership in an individual's lifetime (Barth 1996: 9–10; Beck 1995: 169). It is interesting that different contexts of the ritual can be found in northern, southern and central Thy. The marking of the grave or burial mound through local rooted ritual practices may indicate a differentiated identity formation compared with an area that increasingly ritualizes landscape through hoards.

It is interesting that central Thy, through the ritual action connected to male burials, preserves the prepared standard for men that probably existed in real life. A common standard changed in northern and partly in southern Thy, where a local norm was incorporated in the male graves, introducing a different identity through the ritual act. In this way exclusion and inclusion were exposed through the ritual act, but not in real life. Such a strategy works well within commerce and networking over long distances in the Early Bronze Age. But should these diverse practices be interpreted in terms of social, ideological or religious aspects? Or should they be linked to strategies and opportunities for interaction and contact in an area? No clear or simple answer seems to be attainable here. The burials in Thy indicate that the ritual act was used as a local practice of deliberate male identity formation.

Based on the ritual act as the creator of identity, it is possible that the ritual could be seen as a marker of the internal world of the individual – similar to the feeling of belonging, a feeling we all know and recognize when we have been away from home for a long period of time. Such an identity might have been developed to a higher degree in the areas where meeting foreigners caused a raised awareness of home, native soil. However, it is difficult to interpret the northern and southern groups as areas with a greater contact with outsiders than central Thy. Nonetheless, the concentration of well-equipped graves in the two areas substantiates this (Hornstrup 1998: 27); for example, a twisted gold ring that has an inter-regional distribution, was found in northern Thy.

The ritual burial strategies as an expression of contact with outsiders might be interpreted in terms of how small communities perceive meeting foreigners. To many groups, a stranger may possess magical and religious powers that are either good or malicious (Gennep 1960: 26). Frequently, rites are linked to a meeting with strangers, where separate rituals are conducted in order to remove the special qualities thought to be possessed by foreigners. These properties, such as the "evil eye" possessed by all outsiders or aliens, are thought to be transmitted to the host or those who interact with strangers (Gennep 1960: 27). The term "evil eye" is known from Sumerian wedge writings from the third millennium BCE. At the time, and through all subsequent cultures in the Near East region, the concept has been used to simplify a complex reality and explain adverse events that otherwise inexplicably intervene in people's lives (Sode 1996: 62). For that reason most communities have a strategy for meeting with strangers which is designed to integrate foreigners into the local community by defusing their hazardous properties. The locally based ritual action in Thy might be interpreted in similar terms.

Groups that often had direct contact with strangers through trade, networks or exchange had an increasing need to reintegrate or defuse the forces that the strangers passed to the local host. The individuals were reintegrated into the local community's standards and habitus. J. Lund (2004) has emphasized a similar behaviour in relation to travel and the importance of places in the Viking Age, where the ritualized actions mark specific contexts of the deposition of hoards in wetlands. Here she argues that the deposits in wetlands can be seen as an act attached to travel. One transcends through several liminal stages on a journey and must therefore at the end of the journey be allowed or integrated back into society (J. Lund 2004: 208). A similar local identity could also have been marked symbolically in the grave, where a local identity is expressed in the male burial ritual. This means that people in northern and southern Thy had a different ritualized and grouped behaviour, perhaps linked to the degree of interaction with external groups. By external groups I do not refer to central Thy, but rather to a more regional or inter-regional network.

Thy had contacts not only to the south, but also to the north. Contact with southwest Norway has previously been identified through regional studies of, for example, bronze objects and buildings (H. E. Lund 1938; Johansen 1986; Løken 1989). Several key areas in southwest Norway may have been in contact with the Thy population in the Early Bronze Age. The area at Lista in south Norway, near the southern part of Rogaland county in southwest Norway, shows close links to Thy and Vendsyssel through stylistic features on bronze artefacts (Johansen 1986: 151). In addition, finds of golden arm rings with smooth, slightly narrowed ends could be mentioned here. The type has been found in one male burial from northern Thy dated to period III and two rings have also been found in Rogaland county, but without any detailed descriptions of place or context (Marstrander 1977: 42). Consequently, it would be interesting to look at the material from southwest Norway in order to study the extent of ritual behaviour and interaction in the Early Bronze Age, but unfortunately the material is too scarce. It may be recalled that at Karmøy in northern Rogaland, a man's grave from period III had a sword placed on the chest. A twisted gold ring, similar to a ring from northern Thy, has been found in the same area. It is therefore possible that the local practice from northern Thy can be found at Karmøy, but unfortunately few graves have been excavated and the material is not extensive enough for further conclusions.

In this chapter I have argued that the placement of artefacts in the graves is a way to approach questions concerning the creation of identity connected to local, regional or inter-regional levels. This methodology can be criticized on the grounds that it cannot be stated if the grouped behaviour is an expression of religious, ideological, political, social, local, or inter-regional identity. However, there is a clear difference in the relation between artefact and body, and an analysis of this relationship makes the study of identity in the Early Bronze Age possible, through the relation between individual, group and landscape.

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4

Large-scale “grand narratives” and small-scale local studies in the Bronze Age discourse: the animal perspective

Kristin Armstrong Oma

Body and mind

Towards the end of the conference “Regions on the periphery of Bronze Age Northern Europe”, one of the participants commented, in some distress, that we need to figure out this gap between local and inter-regional Bronze Age studies. The gap referred to is a discrepancy between large-scale “grand narratives” and small-scale local studies in the Bronze Age discourse. This chasm separates two different research approaches: large-scale versus small-scale processes. By using animals as a focal point, I will discuss the differences of these approaches, their language and their aims. I also want to suggest a way to integrate both perspectives with a third overlooked arena – the household practice.

I have previously compared the Bronze Age discourse to the idea of a body/mind dichotomy (Armstrong Oma 2008). From a meta-perspective, Bronze Age research can today be seen as a set of binary contrasts, comparable with the Cartesian dualism. Descartes’s famous *cogito* sentence created a separation between the corporeal body and the rational mind, which led to a conceptual purification – in short, lots of hassle for philosophers trying to create a pure category. Regarding Bronze Age studies, I suggest that micro-scale studies that amass a body of material can be likened to the *body*, and the supposed world of ideas in the Bronze Age universe represents the *mind*.

This polarization is found between two camps that do not communicate very well. Whereas most researchers have been content to focus on small-scale local processes and phenomena (e.g. Harding 2000; Barber 2003; Grön 2004), a few have ventured into the realm of large-scale processes trying to establish an overarching narrative of the European Bronze Age (e.g. Kristiansen 1998; Olsson 1999; Engedal 2002; Winter 2002; Kristiansen & Larsson 2005). The latter explore the basis for claiming there was a pan-European Bronze Age by postulating shared mythology, ritual practices and religious institutions. Studies of small-scale processes are in-depth studies of archaeological sites, often focusing on everyday practices and mundane economic activities such as production and subsistence. These often cherish the differences and regional variations found within Europe. I will explore both traditions from an animal perspective.

Addressing inter-regional contacts within the Bronze Age world has become increasingly popular, and I believe that this is a potentially rewarding point of departure. But we need to create methods by which inter-regional contacts can be addressed also from a local perspective. Stig Sørensen (1993: 6) suggests that such methods should seek to combine the infinitely small and at the same time aim to reach "the infinitely great … the cause of life, its reason and form" (quoting Brandes 1870). Otherwise these two areas of research will not benefit from each other. They are found at diametrically opposing ends of the scale, and as long as these two traditions are unable to communicate, they are both flawed. Stig Sørensen (1993: 6) proposes that if we do not make use of the tension between these two extremes, we are not dealing with the past's own ways of life. Local studies often have a sound theoretical framework and good, solid data. However, these might easily become fragmented and isolated, and have little interest beyond their catchment area. The "grand narrative" studies are fun and exhilarating, but lack solid data – they are superficial as they strive to encompass large areas and enormous bodies of data.

There is a tendency to put too much weight on similarities and to disregard differences (see, for example, Sjögren 2005). My quest is to make these two ends of the scale meet. I would like to engage both ends of the scale in order to establish a middle ground, and thereby a more holistic approach to Bronze Age societies. The study of animals in the Bronze Age forms a looking-glass for doing so, due to their position in household production and simultaneously their role in the religious institutions. My aim is to highlight how animals were perceived both on the large scale of inter-regional cosmological institutions and the small-scale local studies of the household. I demonstrate that animals participated in both these spheres; the domesticated animals were integrated in both the household economy and the ritual sphere of the Bronze Age. I also wish to argue that the cosmological roles of animals relate to the physical actualities of everyday life.

A "grand narrative" of the bronze age?

The overarching narrative is inspired by world systems theory, and tries to establish an overarching narrative of the European Bronze Age, based upon a shared cosmology and religious institutions. Most notable among these are Kristiansen – who created a synthesis that emphasizes power, trade and economy, combining these elements of the European Bronze Age in *Europe before History* (1998) – and Larsson, who has focused chiefly on religion and cosmology (Larsson 1997, 1999a, b, 2002). Together, Kristiansen & Larsson (2005) set out to trace the pan-European myths and cosmology that formed the basis of Bronze Age religion and rituals. A renaissance of interest in Bronze Age communities on a larger scale in the last few years has led to an understanding of coherence in the Bronze Age, postulated as the first European community (Demakopoulou & Jensen 1999; Grön 2004; Hølleland 2008). The heritage left by Almgren (1927) and Childe (1957) is thus back on the agenda after a long period where such areas of study were considered taboo. The "grand narrative" created by Kristiansen & Larsson (2005) actively looks for connections and similarities that tie the regions of Europe together in a way that presupposes a communication, driven by bronze, created and dependent upon common beliefs and attitudes, and, further, common institutions. It is important to discuss and critique this contribution to the Bronze Age discourse in order to establish its strengths and uses (see Harding 2006; Nordquist & Whittaker 2007; and response: Kristiansen & Larsson 2007; Armstrong Oma 2007: 33–35). Although fundamentally motivated by economic factors such as prestige and the acquisition of bronze and status objects, based upon a central organization of local production and the distribution and exchange of its surplus (for example Earle 2002), the idea of a grand narrative hinges upon evidence for shared, religious institutions. Because animals have such a strong presence in the latter aspect of the grand narrative, this is the aspect that is focused upon here.

Following the metaphor of a body/mind split, I claim that the animals in the mind are found in the world of ideas, present in religion and cosmology. These animals are embodied in cultic and ritual objects, such as on rock art panels and decoration on razor blades. These animals belong to the ritual sphere, the abode of gods and heroes. Decoration on bronzes from northern Europe are rich in representations of animals (Kaul 1998). Kaul's influential model of Bronze Age mythology is of particular interest since animals are ubiquitous in his postulated world of myths. He has, through a study of northern European bronzes, suggested that the sun was worshipped in the late Bronze Age. He demonstrates this by the depictions of the cycle of the sun's voyage on razors (Kaul 1998: 262). Depictions of the sun travelling across the sky during the day and through the underworld during the night are, according to Kaul, representations of both beliefs and a ritual reality, based on rituals performed in real life (1998: 51–2).

The sun-horses transport the sun across the heavens during day; sometimes the horses are connected directly to the sun with reins. Horses pull the sun, and the snakes, fish and birds also take part in the cyclical journey of the sun. Animals seem to have different roles concerning the different parts of the sun's journey, and they are always connected to the ship, present in all stages of the journey. Horses on razors always move from right to left, coinciding with how the sun moves over the sky (Kaul 1998: 194), therefore the sun-horses belong to the day. Night ships move the other way, accompanied by aquatic birds, snakes and fish. Kaul (1998: 219) suggests that the fish assist the sun in the day-night transition, and that the snakes have a similar role (Kaul 1998: 237). Possibly the fish are connected to the sun sinking and rising over water, whereas the snakes have this role when the sun is setting or rising over land (Kaul 1998: 270). The Trundholm sun-disc (Aner & Kersten 1976: plates 138–140), dated to the Early Bronze Age, also illustrates this cosmological schema. It consists of a horse pulling a disc, set on wheels. One side of the disc is covered with thin gold sheets; the other side is in bronze. The golden side has traditionally been interpreted as the sun, and the bronze side as the moon. A textual fragment reminiscent of this is found in the Eddic poem Vaftrudnesmål (Edda-dikt 1985: 63), which describes how the two horses, Shinyfax (Skinnfakse) and Frostyfax (Rimfakse), separate the day from the night, and by doing so also traverse the dangerous hours of dawn and sunset. This is similar to Kaul's suggestion that horses help the sun traverse the borders between night and day in Bronze Age cosmology.

Seen together, these examples testify to the complexity of the different contexts depicting animals in religious and ritual contexts throughout the Bronze Age. It is noteworthy that in these depictions, animals are placed in the realm of the heavens, far from Earth and daily life. In the Bronze Age discourse, they are seen to belong to the cosmos, as central agents in the grand scheme of things. Kristiansen & Larsson (2005: 320) suggest "[i]n the pre-modern perception of cosmos animals and nature are powerful and equal to Man. Animals and nature took part of the creation of the universe, and the difference between them is constantly fluid. Animals become humans and vice versa". However, what "equal" signifies in this context remains somewhat enigmatic, and unexplored. It may go beyond the realm of cosmology. Some examples are given that clarify the "realm of equality": both Hittite deities and Egyptian gods had animal attributes that distinguished them from each other (Meskell & Joyce 2003; Kristiansen & Larsson 2005: 70, 284, 321), which established a close relationship between gods and animals, even allowing no separation between human, animal and divine. Their examples attest to how animals were perceived as enormously powerful; the myths portray them as taking part in the creation of the universe (Kaul 1998: 53; Fredell 2004: 437; Kristiansen & Larsson 2005: 320). Therefore it was important to have access to the power of animals: "[g]ods take animal shape to achieve their special powers and abilities, or animals take over part of the human soul. Animals in nature are spirited" (Kristiansen & Larsson 2005: 320). This way of thinking might be the foundation of the sexual human–horse relationship that may be related to the initiation of the king, and can be found in different sources, depicted on Scandinavian rock art (Braarvig 1997; Østmo 1997, 1998; Jennbert 2003; Kristiansen & Larsson 2005: 324–6), also accounted for in Hittite laws and Irish sagas (Kristiansen & Larsson 2005: 324–8).

Figure 4.1, a model originally developed by Larsson (2002) – inspired by Mary Helms (1988, 1993, 1998) – illustrates the structures behind the Bronze Age worldview and religion, according to Kristiansen and Larsson (2005). This model is particularly salient since it resonates with the animals in the postulated myths, in which animals carry the sun and are incarnations of gods. Animals are placed in the sphere of otherness and ancestors – out there, beyond the sphere which is the aim of the journey. An essential problem regarding the model is that it does not fully account for how the animals come to be in the sphere of otherness, which animals have this kind of role and what the animals are actually doing in that sphere. Larsson mentions iconography where horses pull the sun and also the presence of various animals on rock carvings – but he does not discuss this any further (Larsson 2002: 101).

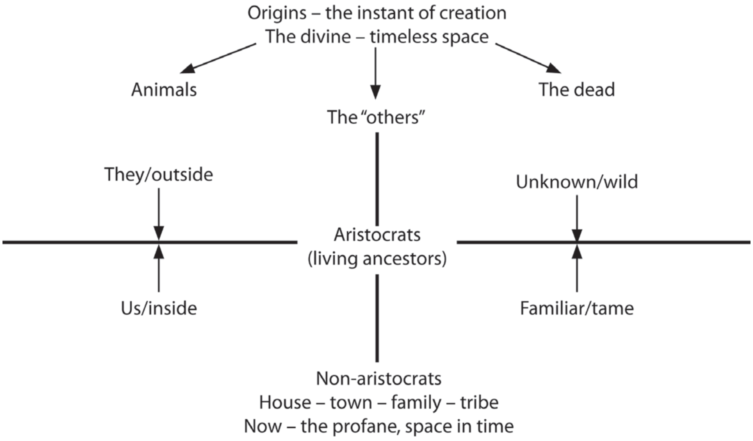
Origins – the instant of creation
The divine – timeless space
Animals
The dead
The "others"
They/outside
Unknown/wild
Aristocrats
(living ancestors)
Us/inside
Familiar/tame
Non-aristocrats
House – town – family – tribe
Now – the profane, space in time

Figure 4.1 Model of the Bronze Age worldview (after Larsson 2002: 107).

The close physical relationship between humans and animals is demonstrated to be a recurring theme in Bronze Age depictions and shows how animals are useful in religious beliefs both as the incarnations of the gods, as their messengers or other assistants, and as agents with decisive powers in the mythologies. However, within the “grand narrative”, the cultural backdrop to the connection between humans and animals is not accounted for, other than stating that humans are in need of animal powers – a rather simplistic and almost totemic statement. In what way animals are important, other than as a source of desirable power, or even what this power consists of, is not explored.

Roles of real-life animals in real-life households, beyond the realm of myths and gods, remain obscured by the emphasis on cosmological institutions. In my view, one of the main shortcomings of the “grand narrative” is that it fails to create a connection between everyday life and cosmological institutions. Yet, this perspective has important implications regarding animals. Transposing animals into the sphere of otherness has consequences for their ontological status, particularly for how they are integrated into the “inside” in the household/settlement context. As a whole, the model forms an important antithesis to the household, since *the same animals participated in both spheres*.

The animal in household practices: subsistence and economic strategies

Turning to the other arena where animals are considered in the Bronze Age discourse, we encounter the mundane world. This represents the earthly body in my suggested body/mind split. The body in this case consists of the *body of material*, the empirical data made up of body parts from real-life animals. The bones are studied by zooarchaeologists, and are most often interpreted within a functionalist framework. The epitome of these ideas is found in the birth of modernity: we return to the Cartesian separation of the body and the mind, which also created a distinction between humans and non-human animals. This approach is firmly grounded in the Cartesian separation of humans and non-humans, based upon Descartes’s ([1637] 1912: 116) notion of animals as biological automata. In acknowledging humans as possessing rational thought, animals were excluded from humanity and were considered to be mechanical beings without rational abilities. In biology and ethology, the trend has been to explain animal behaviour as parsimonious and mechanistic: “The animism that connected humans and animals on a common plane of existence was shattered by logics” that left the world disenchanted and without magic (Franklin 2002: 180). From such a perspective animals only seem to be like us, but are, in fact, stuck with nothing but a mechanical body, whereas humans with their souls are unique (Franklin 2002: 180–81; Ray & Thomas 2003; Milton 2005).

This perspective is demonstrated by the theoretical framework commonly used by zooarchaeologists. For example, economic herd management strategies are assumed from the composition of the faunal assemblage in terms of primary data such as species, age and sex (Payne 1973; Legge 1981a, b; Serjeantson 2007). The species present in the assemblage are indicative of which economic strategies were chosen, such as husbandry and use of primary or secondary products. Studying cull patterns in the distribution of age and species of the bones makes an economic pattern emerge (Payne

1973); however, this approach has been heavily criticized for implying parsimony and excluding social and cultural factors (see Halstead 1998 for discussion). Ageing the assemblage (i.e. determining at what life-stage the animals were culled) gives information about production, exchange, seasonal activities, herd management and use of secondary products (Reitz & Wing 1999: 178–81). Another example is the so-called secondary products revolution in the early Bronze Age (e.g. Sherratt 1981), which is interpreted as an economic intensified mode of production with social implications directly impinging upon the lives of humans and their organization. Social implications inherent in the use of new techniques that require a greater intimacy and shared lives between humans and animals are not, however, investigated. Rather, this revolution is merely seen as an economic innovation, interpreted within an evolutionist, and rather static, frame of mind.

From this brief overview it is evident that there is a divergence in methods, language, research strategies and aims regarding the study of animals in the Bronze Age discourse. Thus, in encountering the everyday life from a traditional zooarchaeological perspective, a very different picture emerged to that of religious institutions. Animals are considered to be an economic factor, and their main asset is their calorific value. They are important in household production, as a means of subsistence. Due to the particular historical situation in which zooarchaeology emerged, it can be claimed that its theoretical framework is primarily obsessed with lists of species, methods of quantification, modes of production, and so on. This focus upon economy and economic strategies is often based upon the modern notion of cost–benefit. Further, it is influenced by natural sciences where the animals subject to experimentation become "data" (Birke *et al.* 2004: 171). Such a point of view stems from the Cartesian separation mentioned above, founded on Descartes's ([1637] 1912: 116) notion of "animals as biological automata". Zooarchaeology takes its cue from biology and ethology, where the trend has been to explain animal behaviour as parsimonious and mechanistic.

Establishing a common ground

Research on the role of the animal within religion versus research on the role of the animal within the household economy represents very different traditions and different languages. The implication of this is that a completely diverging view of animals springs from the two traditions, and appears as two separate spheres. Looking at one or the other of these factors on its own will always be lacking in complexity and a deeper understanding of societies – and is therefore a problematic approach. Consequently, I would like to accentuate that, at the end of the day, both of these traditions are describing the same, physical animals.

A merging point between these two spheres is a poignant dearth in Bronze Age research. Therefore, we should start with a simple, often overlooked fact: animals and humans generally shared their daily lives in the Bronze Age, warriors on their horses and shepherds alike. This is particularly true for day-by-day life in the arena of the household. By expanding the significance of animals in the household beyond the traditional focus on either economy or cosmology I wish to bridge the micro-scale of the household and the macro-scale of cosmology, religion and the mythology of Bronze

Age Europe. After all, people of the past lived in both of these spheres, not in one or the other. It is imperative to recognize that everybody comes from somewhere – parallel to Haraway’s (1988) idea of situated knowledges and a view from somewhere – and somewhere is a local environment. The brave warriors and clever traders left their local environments to engage with the world at large, bringing with them the particular worldview from their local environment. And their goal would ultimately be to return to the household hearth, family and friends in their native home. For example, Kristiansen and Larsson (2005: 199–204) suggest that the iconography of the slabs in the Kivik burial represents bringing back knowledge after a journey to the cultures in the eastern Mediterranean. I suggest that the household becomes a point of merging of these two spheres. A starting point for further musings is, therefore, the events in the household, how people were living with animals in their everyday life, and how this became one of the principles that structured the lives of Bronze Age people. Thus, rather than looking for prestige goods in the household arena we should consider the structuring principles of household practice as meaningful in terms of cultural transmission. This presupposes a perspective of the household as a social arena in which humans and animals alike were active participants.

In order to merge the “grand narrative” of networks, travels, cosmological and religious institutions with the everyday lives of Bronze Age people, it is important to work within a broad European perspective, comparing different parts of Europe. I have chosen to contrast late Bronze Age sites from southern Scandinavia with the contemporaneous site of House 1 on Monte Polizzo in Sicily (see Prescott & Mühlenbock 2001, 2004a, b, in preparation; Prescott 2004a, b) to see how ideas concerning animals are reflected in the practice of the household. I will not go into this in detail here (see Armstrong Oma 2007 for the full research), but rather present two different patterns that can both be related to Kristiansen and Larsson’s (2005) overarching Bronze Age worldview.

My line of argument suggests that animals of the “grand narrative” were the same as those of the economic subsistence strategies of the household. Economy and cosmology were, therefore, mutually embedded in both case studies. By way of animals, these households interacted with the larger *cosmos* they were part of, in totally different ways. Considering that the household represents a *micro-cosmos*, the world surrounding it represents a *macro-cosmos*. The micro-cosmos of the household is made up of elements from the wider cosmos, but in culturally specific ways. Cosmology springs from a desire to make sense of the world (see, for example, Melheim 2006), thus cosmological structures provide a rationale for how to construct the life-space of the household.

Case studies

The case studies are from opposite ends of Europe, consisting of late Bronze Age sites in Scandinavia and a contemporaneous Early Iron Age site on Sicily (see Table 4.1), and have no known relationship. It is not my intention to postulate a connection between them; on the contrary I have chosen these sites because they represent the diversity of the late Bronze Age. The comparison of two such dissimilar situations effectively creates contrasts, thereby highlighting differences and similarities. In particular, their difference in location and cultural expression has great potential for contrasting local approaches to the inter-regional grand narrative. Still, what they have in common is

Table 4.1 Typological and calibrated radiocarbon dates of the case studies.

Site	House ID	Radiocarbon date (BCE)	Typological date	Period	Source
Monte Polizzo	1		700–550	EIA	Dixon (2004: 62–7); Prescott & Mühlenbock (2004b: 184)
Lilla Köpinge	B14:VIII	1: 955±160; 2: 820±95		IV	Tesch (1993: 89)
Lilla Köpinge	B14: 1	770±140		IV–V	Tesch (1993: 89)
Pryssgården	150	809–550		V–VI	Borna-Ahlkvist *et al*. (1998: 169)
Pryssgården	170	904–802		V	Borna-Ahlkvist *et al*. (1998: 188)
Pryssgården	189	971–811		IV–V	Borna-Ahlkvist *et al*. (1998: 203)
Pryssgården	195	827–770		V	Borna-Ahlkvist *et al*. (1998: 209)
Pryssgården	210	816–769		V	Borna-Ahlkvist *et al*. (1998: 225)
Pryssgården	225		LBA (context)		Borna-Ahlkvist *et al*. (1998: 233)
Pryssgården	256	991–820		IV–V	Borna-Ahlkvist *et al*. (1998: 254)
Apalle	K2	700–500		VI	Ullén (1997: 67–8)
Fosie	1	850–560	LBA	V–VI	Björhem & Säfvestad (1993: 83)
Fosie	5		LBA		Björhem & Säfvestad (1993: 83)
Fosie	81	785–410		VI	Björhem & Säfvestad (1993: 83)
Vistad	1	900–500		V–VI	Larsson (1993: 36, 71)
Hötofta	Cultural layer		LBA		Stjernquist (1969: 54–65)
Voldtofte	Cultural layer		LBA	V–VI	Nyegaard (1996: 16)

that they existed within the same overarching frame of the postulated pan-European "grand narrative" (Kristiansen & Larsson 2005). Further, a common ground is that both represent household arenas where human-animal relationships were structuring principles. This commonality subsumes any difference in economy.

One site, Monte Polizzo, was chosen from Sicily. This site was excavated using methods that give a detailed picture of the spatial distribution of various uses of animals, denoting human-animal relationships (see Armstrong Oma 2007: 82–118). The area is special since it is a meeting point between different cultures, both from the eastern and western Mediterranean, as well as further north in Europe.

Several sites – Pryssgården, Apalle, Hötofta, Voldtofte, Vistad and Köpinge – were chosen from southern Scandinavia. All sites are domestic settlements utilizing the same species of domestic animals, and with similar subsistence strategies. They consist primarily of the remains of houses and farmsteads (see Armstrong Oma 2007: 77–156). It has been suggested that Scandinavian Bronze Age societies were closely linked with networks that extended southwards (see in particular Kristiansen 1998, Kristiansen & Larsson 2005).

House 1 is found on Monte Polizzo, a fortified hilltop site in western Sicily, dated to 700–550 BCE (Dixon 2004: 62–7; Prescott & Mühlenbock 2004b: 184). The house, which probably consisted of six rooms, is for human habitation only. The excavators (Prescott 2004a; Prescott and Mühlenbock 2004a, b, in preparation) and other researchers who study this period on Sicily (e.g. Bernabò Brea 1957; Holloway 1991; Leighton 1999; Morris *et al.* 2001; Morris *et al.* 2002; Tusa 2004), have not raised human–animal cohabitation inside houses as a viable interpretation. No architectural features are seen in the domestic arena that would indicate a pen or a confined space where animals could have lived. The floor space of rooms 3, 4, 5 and 6 are covered by ceramic remains, which presumably leaves no space for stalling animals (Armstrong Oma 2007: 164–5). Living animals were not part of the micro-cosmos of the household of House 1, Monte Polizzo; not even bones gnawed by dogs were found in this house (Vretemark 2003). One could argue that the climate made housing of animals unnecessary, but since animals were stalled in other parts of Europe during the Bronze Age when there was climatically no real need (Zimmermann 1999), other factors might lie behind the non-shared life-space of House 1. Since the architectural choices made during the construction of the house rule out a shared life-space, the decision to exclude animals from the house must have been formed by the current practice of the society and, consequently, animals were not considered appropriate cohabitants.

However, animal parts and substances were a part of the household – meat, bone and secondary products were processed, stored and eaten. Animal bones from sheep, goats, cattle, pigs and smaller numbers of red deer are interpreted as remains of meals, and are scattered throughout the house (Vretemark 2003; Armstrong Oma 2007: 102–17). Loom weights found *in situ* next to a wall and a nearby spindle whorl is interpreted as remains of wool processing. A metaphorical interpretation of various animal-related activities and their spatial distribution is presented in Figure 4.2. Incorporation signifies incorporating animals into the body, represented by meat and secondary product consumption by way of animal bones and tableware, and ornamentation onto the body, e.g. of bone fibulae. Cosmology signifies religious and cosmological uses of animals, represented by cultic objects such as astragali and deposited animal sacrifices. Refinement signifies processing, storing and preparing animal products, such as weaving wool and cooking meat, and is represented by spindle whorls, loom weights and cooking pots (Armstrong Oma 2007: 208–209).

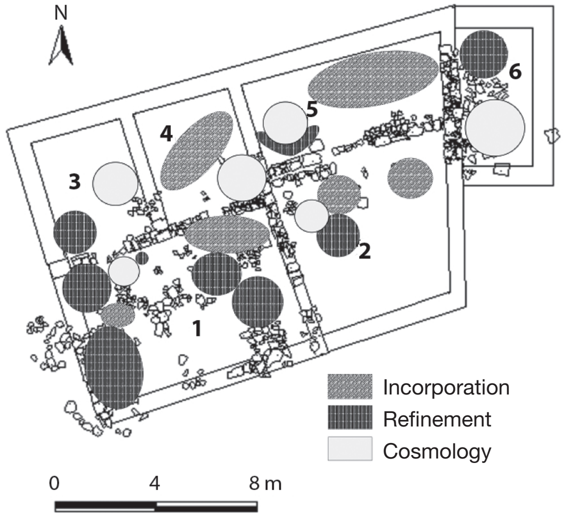

Figure 4.2 Uses of animals in a tentative interpretation of the architecture of House 1, Monte Polizzo.

Animal parts, representing animals from the cosmological sphere of the "grand narrative", constructed cosmological foundations of the house through ritual deposits. Such parts could also act as props that represented and constructed the macro-cosmos inside the household. The astragalus bone had particular significance, and quantities were found both in the house and in graves in the nearby necropolis, suggesting a greater complexity, unaccounted for in the original model (Armstrong Oma 2007: 184–8). Particularly chosen animal parts were found both in the "inside" sphere of the household, and the "outside" sphere of the dead, in the graves. Comparing this scenario with Larsson's (2002) original model shows that it is roughly applicable to Sicily (see Figure 4.3). Animals belong in the "outside" sphere, among the various "others".

Larsson's (2002) original model is less easily applicable to the Scandinavian case studies. In Figure 1, the original model, animals are placed solely in the outside sphere. In Scandinavian type 2 houses (typology referring to Tesch 1993: 162) there is believed to be interaction between humans and animals within the house, since one part of the type 2 longhouse was used as an animal byre (e.g. Becker 1972; Tesch 1992, 1993; Göthberg *et al.* 1995; Barker 1999; Fokkens 1999; Olausson 1999; Rasmussen 1999; Årlin 1999; Ethelberg *et al.* 2000; Streiffert 2001; Vretemark 2003). There is therefore a human–animal shared life-space inside some houses that testifies to the presence of animals in the inside sphere of the household. Animals thereby participate actively in the micro-cosmos.

Figure 4.4 shows a metaphorical interpretation of the layout of activities in a constructed Scandinavian "model" type 2 house, based upon the architecture of Köpinge House B14:VIII, and deposits in the Pryssgården longhouses and Apalle houses. It demonstrates a significant presence of animals. Living animals are present in the eastern part of the house, signifying shared life-space. Further, the central hearth in the western part testifies to both refinement and incorporation of animal products. Cosmology is represented by depositions of animal bones together with everyday objects in post

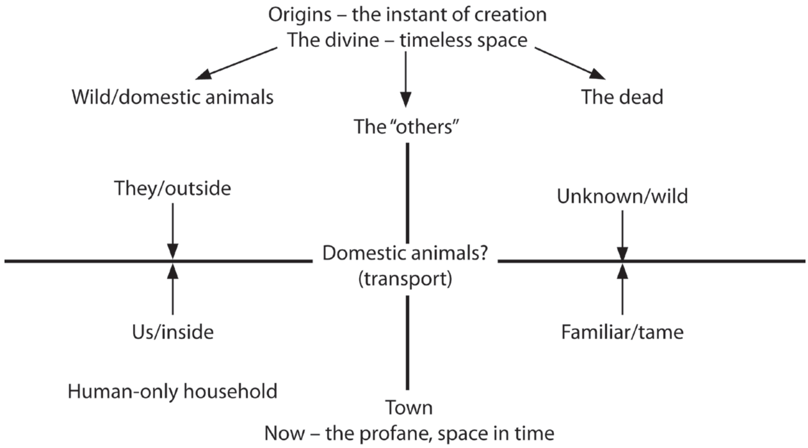

Figure 4.3 House 1, Monte Polizzo: a human-only household. A reconfiguration of Larsson (2002: 107) that considers the role of animals in the micro-sphere of the household and the macro-sphere of the "grand narrative".

holes, thus creating a frame around the central section used for human habitation (Armstrong Oma 2007: 210–11).

Animals were also present in a wider domestic arena in Late Bronze Age southern Scandinavia; cattle and sheep could therefore graze in areas adjacent to the settlements. Due to widespread deforestation the Scandinavian Bronze Age landscape probably became more open (Kaland 1986; Odgaard 1992; Lagerås & Regnell 1999; Skoglund 1999; Prøsch-Danielsen & Simonsen 2000a, b), providing perfect grazing lands for flocks of domestic animals. Preserved Scandinavian Bronze Age landscapes tend to be without physical boundaries, and have fields situated some way from the settlement, which suggests that an engagement with wider surrounding landscapes existed (Soltvedt *et al.* 2007). Horses and pigs were possibly partly living in the outside sphere – beyond the settlement. Lepiksaar (1969: 191) suggests that the ageing data from horse bones at the site of Hötofta shows an economic strategy where horses were left to roam (“Weidegang”), presumably in the wild, and the animals were used as a combined “meat on the hoof” and a source of riding and working horses, from which the household could pick the most suitable individuals and give them intensified training and nourishment. These lived until old age, whereas the rest of the animals were left to their own devices. Nyegaard (1996: 36) claims that some of the pigs in the well-preserved site of Kirkebjerget, Voldtofte, were so large that they could have bred with wild boars, indicating that the pigs were roaming free. An interaction with the wider landscape and environment was consequently provided by and through the animals.

Animals can therefore simultaneously represent the outside sphere, but live on the inside, in close relationship with the household (see Figure 4.5). Considering depositional practices, the bones from domestic animals that created a cosmological grid for the house showed that the animals had been household members, living in a shared space with the human members. Moreover, the depositions are mainly found in the boundary between inside and outside (Ullén 1994, 1995, 1996, 1997; Borna-Ahlkvist

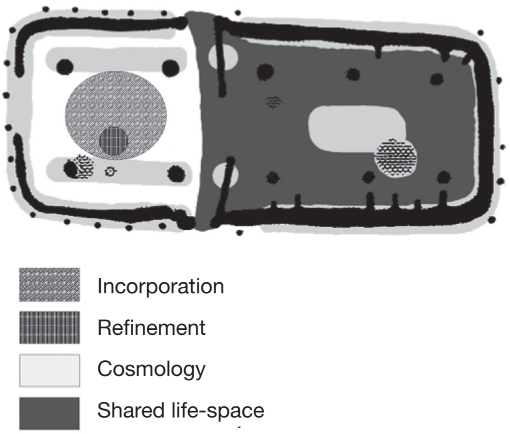

Figure 4.4 Uses of animals in a “model” Scandinavian type 2 house, based upon the architecture of Köpinge House B14:VIII and the deposits made in Pryssgården longhouses and in Apalle houses. The areas of incorporation and refinement overlap with the hearth.

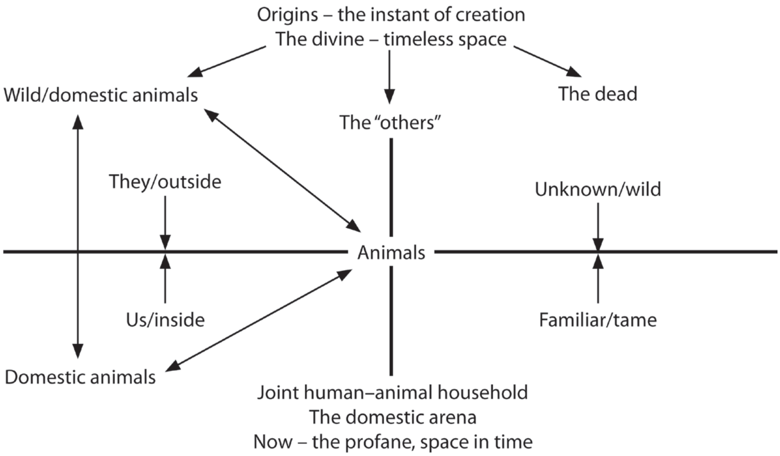
Origins – the instant of creation
The divine – timeless space
Wild/domestic animals
The dead
The "others"
They/outside
Unknown/wild
Animals
Us/inside
Familiar/tame
Domestic animals
Joint human–animal household
The domestic arena
Now – the profane, space in time

Figure 4.5 Scandinavian type 2 houses: a joint human–animal household. A reconfiguration of Figure 4.1 (Larsson 2002: 107) that considers the role of animals in the micro-sphere of the household and the macro-sphere of the "grand narrative".

2002), leading to a tentative interpretation of the animals as mediators between the inside and the outside, representing transgressions of the boundary.

Was there ever a Bronze Age "grand narrative"?

A great dynamic is seen, where animals transgressed the inside/outside boundary by simultaneously occupying both spheres. Animals were integrated in the inside world as a necessary and self-evident part of the life experiences of the members of the household as a whole. In my two reconfigurations of Larsson's (2002) model (Figures 4.3 and 4.5), I have chosen to replace the aristocrats in the centre of the original model with animals in both. In these case studies animals are placed at the boundary between the inside and the outside, since animal parts were deposited at house borders. Possibly the animal parts acted as transformational mediators between inside and outside.

These models express how specific human–animal relationships are related to the model of the "grand narrative". When they are compared, it is obvious that the "grand narrative" was not articulated in the same way in the two case study areas. A comparison of Larsson's original model with the complex scenarios of the Scandinavian and Sicilian households reveals the static nature of the original model. This is an oxymoron, since the "grand narrative" promotes a dynamic network of people travelling around Europe, probably accompanied by animals, simultaneously living within the dogma of the "grand narrative" and also spreading it. This leads to the question of whether a "grand narrative" ever existed, or, rather, whether the model expresses it correctly.

I argue that on the grounds of the similar structures seen in the cosmological human–animal meeting points in the case studies a general "grand narrative" could have existed. These similar structures are suggested by the deposits of domestic animal bones in the peripheries of the houses, and a general preference for bones from the head and the lower legs. In this narrative, animals were mediators between the inside and the outside, expressed in the deposits of animal parts in the boundaries of the houses and used to construct cosmological foundations. This suggests that both societies retain elements from the "grand narrative". But these elements were articulated using different components.

However, a number of differences are seen. The nature of the deposits with animal parts differs, as the Scandinavian deposits represent everyday household objects whereas the Monte Polizzo deposits represent the foreign. In House 1, Monte Polizzo, animal bones were deposited with *outlandish* objects – represented by a large bronze cauldron and a ritual drinking cup, both one of a kind. This suggests that animals belonged to the foreign, possibly ritual, outside sphere, and represented outwards movement and contact with foreign others. By contrast, in the Scandinavian houses animal bones were deposited with other domestic objects; suggesting a great proximity between humans and animals. Animals were embedded in the midst of the household sphere, grounded in everyday practices. This indicates a difference between the case studies in the axis of proximity and distance. While there is a significant distance between humans and living animals in House 1, Monte Polizzo, there is a great proximity in Scandinavia, where the living arrangements made room for humans and animals both under the same roof.

The differences seen between Scandinavia and Sicily can in part be accounted for by the differences in historical situation. The southern Scandinavian sites represent small-scale, self-sufficient agro-pastoral societies that lived in proximity with domestic animals, whereas on Monte Polizzo, the process of proto-urbanization had started, a process leading to alienation between animals and those who consumed them.

This does not mean that animals were more or less important in the ritual lives of either case study, rather that they expressed different ontological perceptions of animals. Probably, animals held different ontological status. The case studies demonstrate that it is not sufficient to merely create grand narratives; their articulation must also be investigated, not only through ritual deposits of extraordinary objects – such as done by Kristiansen and Larsson – but also through small-scale studies of people's daily lives.

This discussion demonstrates that the attempt by different research traditions to create pure categories is flawed. Further, it links up with the philosophical question of what an animal is. According to zooarchaeologists, animal as a category is very corporeal and physical – and is simply a quantifiable object. But, for the grand narrative, animals are divine beings and their physical presence does not reach beyond iconography. The question of what an animal is has traditionally been closely bound to the "modern" nature–culture debate, which assumes that nature and culture indicate separate spheres. However, the nature–culture dichotomy has been demonstrated to be an artificial division (e.g. Latour 1996; Franklin 2002; Ray & Thomas 2003). Latour (1996) demonstrates that we have never been modern, and that the relationship between nature and culture is as seamless as ever. The process of "conceptual purification", the attempt to segregate humans from non-humans based upon the Cartesian mind–body dualism where the capacity for reason is separating humans from other beings, is demonstrated by Latour (1996; see also Coetzee 1999: 33) to have been unsuccessful. Likewise, the division between the cosmological and the mundane animal is also artificial and unsuccessful.

This study demonstrates the usefulness of animals as a means to study the Bronze Age "grand narrative", particularly since their very being is vital in bridging the mind–body gap. Animals are potentially simultaneously a part of the micro-cosmos of the household, and also the macro-cosmos of the outside spheres. Thus, large-scale cosmological structures become implemented in small-scale households. Together, these areas of life combined to make a rationale for the construction of life-space for Bronze Age people.

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5

Reconsidering a periphery: scenarios of copper production in southern Norway

Anne Lene Melheim

Introduction

From a Norwegian point of view, the academic division of the Bronze Age world into centres and peripheries has been an obstacle to understanding the impact made by metals and metallurgy in this remote corner of the world. The scarcity of bronze finds has been the point of departure for most Bronze Age researchers, whether arguing that the Norwegian Bronze Age culture was qualitatively different from that of central Scandinavia, or that it was rather a matter of degree than of cultural level. Despite the fact that Norway has rich and easily available copper deposits, the utilization of local copper has been considered implausible, mainly judging from the presumption that the copper-bearing regions lacked the technological and organizational premises for any such production. Over the last few years, however, the general attitude towards this topic has changed; several scholars now advocate some level of indigenous production on the Scandinavian Peninsula. A number of questions regarding regionality and, more specifically, relations between centres and peripheries, arise in the wake of this turn. The first question is rhetorical, but nevertheless essential: if groups at the outskirts of the Bronze Age world had direct access to metal, does this by definition make them less peripheral? Another question relates to source-critical factors: why are there so few signs of conspicuous consumption (i.e. social competition) expressed through large-scale depositions of metals in the areas with high potential for prehistoric mining? The aim of this chapter is to contribute to the ongoing discussion on copper production by formulating some problems related to group interaction. If we take seriously the fact that technology and technological innovation is always entangled in social relations, exploring the social and cultural context for copper production may be one step in the direction of locating Bronze Age copper mines. At the bottom of the approach here lies the notion that every inhabited place is also *a socially constituted space* (i.e. a “centre” on its own terms; cf. Nordenborg Myhre 2004: 26–9). The time frame is purposefully wide; finds mentioned in the article cover a time span from the ephemeral traces of metallurgical beginnings in southern Norway at the transition to the Late Neolithic (LN) c. 2400 BCE, to the steadily growing and solid evidence of metal production and conspicuous consumption of the Early Bronze Age (EBA) and Late Bronze Age (LBA), c. 1700–500 BCE.

Centres of consumption versus centres of production

Metal tends to play the role as *the* civilizing factor in portrayals of Bronze Age communities. Since accumulation of metals has been the main criterion for defining centres, areas with few bronze finds have automatically, although not necessarily intentionally, got to play the supporting role as peripheries (i.e. bleak shadows of the metal consuming centres). The image thus created of lively, innovative centres and passive, imitating peripheries has serious flaws that have first and foremost affected the peripheries, and also barred the way for understanding the dynamics between centres and peripheries, creating a binary dualism where the centres are both definitive and utterly defining (cf. Nordenborg Myhre 2004: 26–31). An inherent misapprehension that has contributed to this is that the introduction of metals and metallurgy is considered *per se* to lead to stratification and social display. However, whereas metals already circulated in Scandinavia by c. 3900 BCE, in typical hunter–gatherer communities (Halén 1994: 153–62; Huggert 1996; Klassen 2000: 98–105), the impact of metal as a transforming power is first seen 2000 years later. Although this transformation was contingent on the advent of tin bronze, which differs from unalloyed copper as a social factor because it presupposes a mosaic of long-distance exchange relations (and is thus more prone to be treated as an alienable commodity), the Mesolithic example illustrates that neither the circulation of metal objects nor the introduction of metallurgy are direct roads to conspicuous consumption, as often seems to be implicitly assumed.

Consistent with the above, in Scandinavian Bronze Age research metal procurement soon became inextricably linked to long-distance exchange as one of the motors of trade and networking, a factor that has evidently played a decisive role in defining centres and peripheries (e.g. Larsson 1986; Kristiansen 1987). The idea of bronze import was, however, already, central at the turn of the nineteenth century CE, in creating an image of lively Bronze Age trade, an arena for the exchange of culture and the spread of styles (Montelius 1919: 89). Importation was considered an advanced cultural interaction of higher esteem than the toil of mining. One thing is the fact that copper and tin are unevenly distributed in the Earth's matrix, seldom occurring together. However, it seems that the lack of *tin* in Scandinavia was stressed in particular as an argument against local production (Montelius 1878: 33). The notions of entrepreneurs, travelling metallurgists and inter-regional metal trade formulated by V. Gordon Childe (1930: 4–11, 44; 1939: 113–17), contributed strongly to ideas about the role of the market in the European Bronze Age, metal exchange later becoming one of the main assets of Bronze Age archaeologies in the post-culture-historical era (Gröhn 2004: 125; Hølleland 2008). In particular, this view was consolidated by the concept of a Bronze Age world system and the underlying premises of asymmetrical resource distribution and the competitive character of elite networks. Whereas bronze by definition travelled northwards, amber, skins and furs moved southwards. The long-standing misapprehension that Bronze Age groups on the Scandinavian Peninsula did not have direct access to metals has contributed to further increasing the archaeological status of the areas controlling the flow of metals (i.e. the southern Scandinavian centres of accumulation).

Compared with southern Scandinavia, the amount of metal finds that have been unearthed in Norway is very modest. The small amount becomes all the more enigmatic when taking into account the country's rich natural resources of native metals, sulphide ores and, in some areas, carbonate ore in oxide zones (Neumann 1985). In general, Norwegian ores are more easily attainable than for instance the Swedish ores, which tend to be covered by thick glacial deposits (Klassen 2000: 215). Still, whereas prehistoric copper production has been on the agenda for many years in Sweden (Berg 2006: 32), the scarcity of metal finds seems to have had an almost intimidating effect on Bronze Age research in Norway. Problems related to the representativeness of the archaeological record in this particular case are far from solved. We do not know, for instance, if the consumption of metals in terms of intentional deposits, though following the same general conventions, had the same social standing in Norway as in southern Scandinavia. Few scholars have considered the possibility that metal items may have been less significant as objects of social display in areas where mineral deposits were rich. It remains a paradox that Denmark, one of few European regions with no copper, has by far the largest amount of deposited metal. Was distance from the sources perhaps a factor propelling the extravagant consumption of bronze in southern Scandinavia? Another point that must be made is that the lack of metal finds is by no means an argument against mining; comparative material from Europe indicates that the mining areas themselves are not necessarily rich in metal artefacts (e.g. Needham *et al.* 1989: 385; O'Brien 1994: 183–5; Shennan 1998). Moreover, the old idea of large copper producing monopolies has proven inadequate for several regions and investigations in the mining villages of the eastern Alps have contributed with alternatives to the model of centralized and institutionalized large-scale production.

In Scandinavia, the past 10–20 years' contributions to the question of copper mining have led to important new insights. Some of the underlying arguments against local production are now considered obsolete and a number of important new points have been made (Janzon 1984, 1986, 1988; Bengtsson 1986; Stenvik 1988; Weiler 1994: 35; Kaliff 1994, 1997: 62–5; Nordenborg Myhre 1998: 62–6; Klassen 2000: 212–17; Johansen 2000: 26–7; Noréus 2001; Prescott 2006; Goldhahn 2007: 343; Melheim 2009, 2012): primarily, that a lack of insight into the quality and richness of Scandinavian ore deposits has stood in the way of developing ideas about indigenous production. A second point is that the assumption that metallurgy and notably smelting is too advanced for small-scale societies is flawed. Judging from the quality of the indigenous deposits and their attainability, the potential for Bronze Age copper mining on the Scandinavian Peninsula is very good, especially since it is now acknowledged that sulphide ore was exploited in the Bronze Age and well before that (Stenvik 1988: 298; Tylecote 1992: 36–37; Vandkilde 1996: 29; Ryndina *et al.* 1999; O'Brien 2004).

As an increasing number of scholars are arguing for indigenous production, we must start discussing the cultural and social bearings of the theory. If copper was mined, who were the miners and who benefited from the production? Would any such production be aimed at local consumption or regional exchange systems? Did native groups control the resources or were the central areas in charge of the resources of the hinterlands? Another evident problem to be approached is the scale of production: would we be talking about underground mining as known from Austria, Spain, Great Britain and Ireland, or small-scale exploitation in open quarries? As cognitive and technological barriers are no longer considered plausible explanatory models, we have to consider other possible barriers that may have hindered the adoption of extractive technologies. In a study from Västergötland in Sweden, Eva Weiler (1994: 36) points out that the incentive for mining relied on an interest in metals and suggests that a potential lack of such in the areas where copper deposits are rich may have worked as a cultural or even *ethnic* barrier against mining. Is there any reason to believe that the same cultural – not to say ethnic – barriers were at work in all the copper-bearing regions on the Scandinavian Peninsula? As will soon be demonstrated, this was clearly not the case. Copper ore is not only present in the inland forest regions, but widely distributed over the entire Peninsula, including areas with a flourishing "metal culture". To try and answer *some* of the questions I have posed, I shall now discuss two very different scenarios of copper production in southern Norway, from two regions culturally very different from each other, but sharing the same favourable conditions for Bronze Age mining.

Coastal connections: Karmøy and Bømlo

The southwest coast is among few areas in southern Norway diverging from the general picture of metal poverty. Metal objects were circulating in Rogaland and Vest-Agder at least from the Late Neolithic (Melheim 2011). From EBA I onwards the coastline was permeated by metal culture. Judging from the rich depositions, we may assume that a demand for metals was present within this region. Most notably, at Karmøy, Jæren and Lista hoards and burials indicate that metal objects were used to express social distinctions and that leading families demonstrated their social status through conspicuous consumption of metals. Elaborate, monumental grave mounds with burial equipment comparing to the famous Danish oak-cist finds have frequently been ascribed to a southern Scandinavian, or more particularly Jutish, cultural milieu. Figurative rock art is abundant, indicating an innovative ritual "scene". During the last thirty years a steadily increasing number of Late Neolithic–Bronze Age farmsteads and villages with longhouses of European types have appeared. Also, local bronze manufacture is demonstrated by the many soapstone moulds, which, judging from the distribution of axe types (cf. Baudou 1960), indicate contacts with the Danish islands, Scania and Jutland. Meeting the requirements of Bronze Age centres, Karmøy, Jæren and Lista were nodal points for southbound and northbound coastal connections. Relations with Jutland in particular have been considered important for Late Neolithic–Bronze Age developments in the region. Despite the clear southern Scandinavian affinity, signs of easterly contacts are also present. Of particular interest here is a mould for a Mälardalen axe, which is one of a kind in Scandinavia (see Figure 5.1). The grave mounds are accompanied by stone cairns, which have frequently been ascribed to a northeasterly Bronze Age complex. The idea of a "cultural dualism" in southeastern Norway between farmers and hunter–gatherers, alternatively Bronze Age versus Stone Age material culture, or, metal-rich centres and metal-poor peripheries, was among other things based on the concurrence of barrows and cairns (Nordenborg Myhre 2004: 37–42, with references). Clearly, although the material culture of this area speaks of contacts across Skagerrak, it is far from identical to Denmark, and it seems that several different cultural traditions were adopted, reproduced, negotiated and transformed. Lise Nordenborg Myhre (2004: 31) has suggested that instead of the old static models of two adjoining cultures or cultural meetings, a hybrid culture concept may be used to illuminate how the articulation and circulation of material elements, with different references in space and time, were used within different contexts and across established categories.

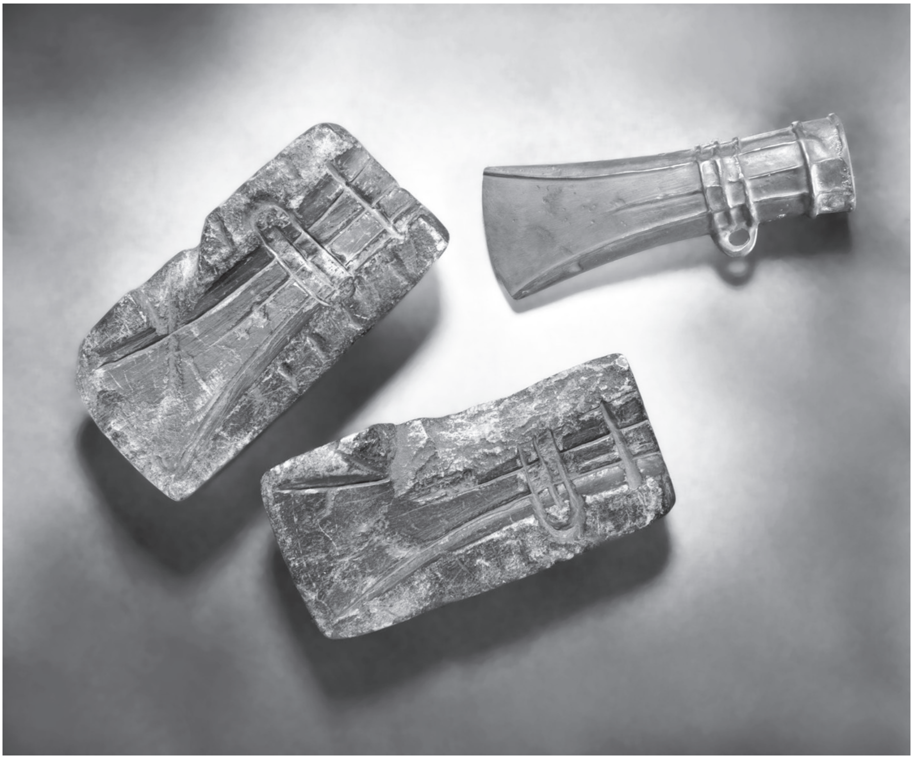

Figure 5.1 A mould for a Mälardalen axe of the Norwegian type from Tjesseim in Rogaland (S4660/S7090; photo from Museum of Archaeology, University of Stavanger).

The preconditions for the blossoming Bronze Age centres on the southwest coast have traditionally been related to agricultural resources or, alternatively, extrovert maritime practices. Looking at other resources that may explain the accumulation of wealth in these areas, Karmøy's metal deposits stand out as an evident alternative. In modern history Karmøy was renowned for its copper mines. The Vigsnes mine was the largest copper mine in Norway in the late nineteenth century CE and a significant source of copper in Europe (Berg and Nordrum 1992: 66–7). Nordenborg Myhre (1998: 62–6) has earlier drawn attention to the favourable conditions for Bronze Age mining at Karmøy. She also hints at a possible connection between the production of soapstone moulds and copper, pointing out that soapstone resources are plentiful, for instance, on the mainland east of Karmsundet. A presumed centre of copper and soapstone production at Karmøy is considered different from that of consumption and casting in the Stavanger area, which has the largest concentration of soapstone moulds in southern Norway, possibly indicating that there was a cultural boundary between producers and consumers. When approaching regional patterns in production–consumption, the spread of technology is obviously an important aspect. It seems credible that long-term contacts between Denmark and Vest-Agder, Rogaland and Hordaland counties may have involved the spread of specialist know-how (e.g. casting technologies). Childe's theory that metalworking spread through the enterprise of travelling specialists –

smiths, mineral prospectors and miners – has had its revival with recent finds and interpretations again stressing the western European Bell Beaker phenomenon as a catalyst for metallurgy (e.g. Craddock 2003: 8). It is worth noting that the highest number of type IC flint daggers in Norway comes from Rogaland (i.e. Karmøy and Jæren). The type represents the finest flintwork of the first half of the Late Neolithic, presumably related to Beaker influence (Vandkilde 1996: 281; Apel 2001: 236). Jan Apel (2001) has suggested that these daggers were manufactured by specialists, the fine workmanship indicating that they were imported. Alternatively, they could have been made by travelling flint smiths. The flint producing communities of Jutland encountered and adopted metallurgy in LN I. Judging from the many flint daggers from southwest Norway, it is conceivable that metallurgy was transmitted to this region through the same networks at the onset of the Late Neolithic. The southbound coastal connection seems a plausible explanation for the initial spread of metals and casting. It is perhaps also possible that experience from flint mining could have been transferred to copper mining in an area so rich in copper resources (and other relevant metals) as Karmøy. Whether smelting technologies could also have developed within such a natural milieu from the available metallurgical knowledge is an open question. However, the use of fire-setting in combination with hammer stones, which is frequently encountered in Bronze Age mines, does not seem consistent with a technological transferral from Jutish flint mines, since fire-setting would destroy both the flint and other artefact materials like quartz and greenstone.

However, a different trajectory for the evolution of mining technology in this region is equally probable. The archipelago of Bømlo north of Karmøy is renowned for its stone industry, dated to c. 9700–4000 BP (Olsen and Alsaker 1984: 10; Alsaker 1987: 61–75). In the Middle Mesolithic innovative hunting groups began exploiting greenstone and rhyolite as substitutes for flint and the Bømlo archipelago remained a regional centre for greenstone production, procuring large parts of Hordaland and Rogaland, and also Sogn and Fjordane with Vespestad and Vestland type adzes in the Neolithic (Solberg 1988: 99). Whereas the main quarry at Hespriholmen bears some resemblance to a mine shaft, being nine metres deep and seventeen metres wide, the two other quarries consist of small opencasts covering an area of 250 m^2 (Alsaker 1987: 16–19). Spoil heaps identified at the sea bottom, the largest beneath the main quarry, contained evidence of the technology employed to quarry the hard basaltic rock (i.e. large unmodified hammer stones). Most mauls weighed approximately 5 kg, and approximately 98 per cent of the examined tools were made of a durable gabbroid stone, which would have to be brought to the island by boat. On the basis of fracture surfaces on the rock faces and layers of coal beneath them, it is argued that hammer stones were used in combination with fire-setting.

Of particular interest here is the suggested unbroken continuity in axe production over 5500 years. It is claimed that this was dependent upon direct transferral of knowledge from one generation to the next (Olsen and Alsaker 1984: 79), supposed to have ended at the transition to the Late Neolithic. Dates are mainly based on shoreline displacement curves and artefact chronology. Since only a few radiometric dates are available, the idea that quarrying ended at the onset of the Late Neolithic rests on the general decline of greenstone axes in this period. Quarrying appears to have been most intense at five metres above sea level in the main quarry. Supposedly, the five metre level was quarried in an early phase around 7000 BCE when the sea regressed (Alsaker

1987: 70). The lower part of the quarry was however once more available around 2000 BCE. But since the production of greenstone is supposed to have dropped dramatically at this time, quarrying in the Late Neolithic is not considered very likely. This conclusion is biased. Although it is probably correct that the production of greenstone axes ended at the transition to the Late Neolithic, this does not necessarily mean that all quarrying stopped. In my opinion an alternative scenario of continued mining, where greenstone was not necessarily the aim, is a possible interpretation of the archaeological evidence from the quarry. In the main quarry at Hespriholmen, the spoil heaps amount to roughly 80 per cent of the total quantity of stone quarried (Alsaker 1987: 44–5, 76–7). The high amount of seemingly unproductive waste of valuable greenstone is explained as a consequence of a discriminative selection process where brittle material caused by fire-setting was left out. Could it be that in this particular part of the quarry it was not the greenstone that was the main target? Greenstone has other qualities apart from being good axe material; for instance, it is a common host rock for metals. Within the Caledonides and the Sunnhordland eruptive complex, which the greenstone and rhyolite quarries in Bømlo belong to (Alsaker 1987: 12), gold and pyrites like chalcopyrite are hosted by basaltic rocks like greenstone and quartz. As already pointed out, and as indicated by the Hespriholmen evidence, fire-setting would destroy the greenstone. A possibility that should be explored further is that the use of fire-setting was limited to a late phase of quarrying and related to the exploitation of metals and not greenstone.

The Bømlo archipelago is in my opinion a very plausible context for mining in the Bronze Age or earlier. The abundance of stone and mineral resources, combined with the long-term reproduction of technological competence aimed at exploiting them, strongly point in the direction of a continued exploitation of these resources in the Metal Age. Mining and quarrying has certainly played an important part in Bømlo's more recent history, when the efforts of the Stone Age were matched by the copper- and gold-mining industries of the late nineteenth century (Berg and Nordrum 1992: 69; Jansen 2004a, 2004b). The utilization of soapstone is represented by a medieval quarry close to the gold mines (see Figure 5.2). The cultural preconditions for mining were certainly also present, the many metal finds from the west Norwegian coast strongly indicating that there was a "market" for metal products. At Bømlo itself, disregarding a large number of cairns which may belong in the Bronze Age, the only evidence of metal culture is a sword-blade retrieved from a bog at Sørvoll, probably a rare EBA II grip-tongue sword, which is otherwise limited in distribution to Jutland and northern Germany (Aakvik 2000: 34–5). However, two finds of flint daggers of the exquisite parallel-retouched IC-type and a number of other metal finds from the broader Sunnhordland region (Aakvik 2000: figs 5, 8) suggest that the inhabitants of Bømlo were in contact with metal-producing groups in the Late Neolithic–Early Bronze Age. The flint daggers and the bronze sword again seem to underscore the Jutish contacts and a similar scenario for the introduction of metals (and metallurgy) as that suggested for Karmøy seems plausible. But when it comes to the question of mining, a different scenario of a local technological trajectory opens up. As demonstrated by the numerous finds of worn cobbles in the quarries, it appears that hammer stone battering combined with fire-setting, a mining technology paralleled in European Late Neolithic–Early Bronze Age mines, was practised at Bømlo, and that the use of hammer stones rested on a local tradition that was several thousand years old.

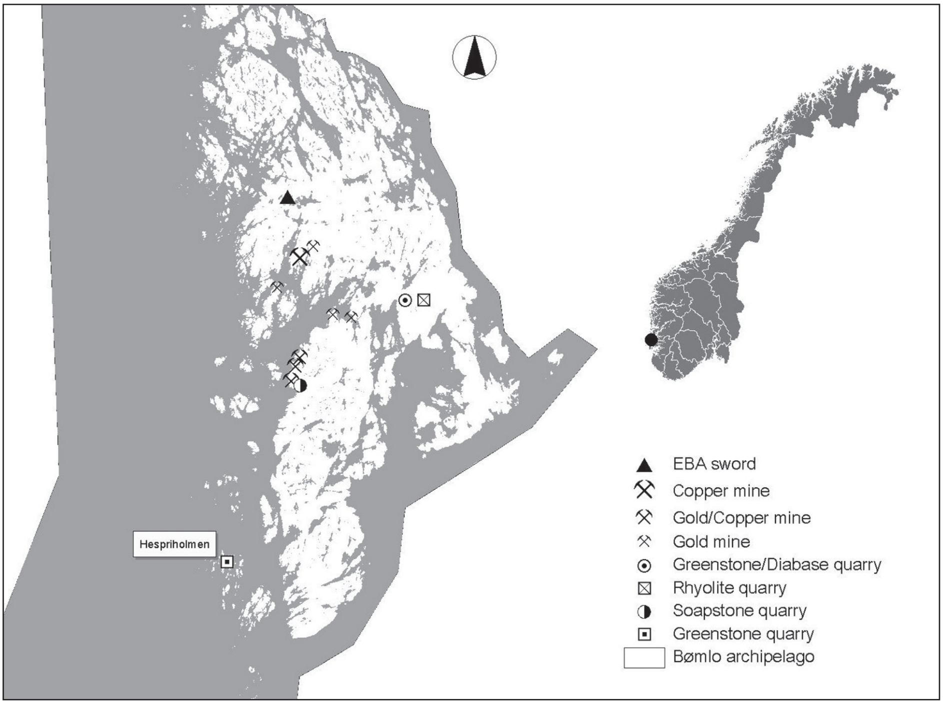

Figure 5.2 Map with overview of early modern mines and prehistoric quarries in the Bømlo archipelago of Sunnhordland. The find-spot for an EBA sword is indicated by a triangle.

The chronology and geology of the Bømlo quarries must be further investigated before the scenario of copper production can become more than a good guess. A reasonable objection to this scenario is that the archipelago is fairly well examined by archaeologists and prospectors in recent times – would they not have reported about early workings? Despite the conspicuous shape of the main quarry at Hespriholmen though, it was not identified as such until 1923 CE (Alsaker 1987: 11). Another factor that may have prevented the identification of metal mines is that archaeologists working in the area automatically have had their minds set on stone quarrying. Contrary to the dominant theory, but not necessarily in opposition to it, I have pointed out that local traditions may have played a greater role than previously suggested in the evolution of technologies relevant for copper production. Either we should envision a one-way transferral of metallurgy, and perhaps smelting and mining, in the wake of the Beaker transformation in the late third millennium BCE, or a transformation of the already established local quarrying traditions facing the technologies of the new era. Rather than concluding, I want to stress the interplay between external influences and local technological traditions, which makes the picture a lot more complicated than that of metal-consumers and metal-producers living side by side. The theory put forth here of metal production in Bømlo and Karmøy, and notably the idea of two different technological trajectories, must be tested by future studies.

The taiga of Hedmark: Kvikne

The large county of Hedmark is dominated by mountains and forests and is sparsely populated. In comparison, Rogaland's present population is more than double in an area one third the size. In a Bronze Age context, Hedmark is considered a periphery, the rich agricultural lands at central Hedmarken between Hamar and Elverum being an exception. The river Glomma with tributaries connecting to Swedish waterways divides Hedmark in two, running from north to south and all the way to Fredrikstad in Østfold county. The Eurasian taiga starts here and ends by the Pacific. Hedmark is a typical arena for hunter and gatherer groups and traffic north–south and east–west, and an area with abundant natural resources – most notably game and minerals.

The landscape of Kvikne in the northernmost part of Hedmark is renowned for its industrial past, notably a number of prehistoric soapstone quarries and the copper mines of the seventeenth to nineteenth centuries CE. Kvikne mine is among the earliest documented copper mines in Norway and was for some time also the largest (O. T. Hagen 1951: 414–60; Berg and Nordrum 1992: 17). The mines were run for copper from pyrite copper ores embedded in quartz/quartzite and mica schist, and the outcome was rich. The bedrock in the area belongs to the Trondheim region of the Caledonides, characterized by a great number of small, strata-bound cupriferous pyrite deposits, and several mines have been run in Kvikne and the broader Tynset region in recent history. From a Bronze Age perspective the concurrence of copper and soapstone is appealing, as both resources were central in the production of bronze artefacts.

The Bubakk quarry in Sandbekkdalen in Kvikne represents the earliest documented soapstone quarry in Scandinavia. The quarry was first dated to the pre-Roman Iron Age (Skjølsvold 1969: 219–21). There now seems to be a consensus that production goes back to the Bronze Age, as indicated both by the tall low-bellied vessel type with a ridge along the rim produced at the quarry (Østerås 2004a: 5) and the calibrated radiometric values spanning from 750–110 BCE (Goldhahn 2007: 132). The artefact assemblage (i.e. a wooden bowl, a birch bark container, hammer stones and wooden shovels) fit equally well into a Bronze Age scenario (cf. Gaustad 1965: 99; Skjølsvold 1969: 208–09, 221–2). Taking also the thickness of the bedrock removed into account it seems very likely that quarrying must have started in the Late Bronze Age or earlier. Most interestingly, the hammer stones and wooden shovels echo equipment from Bronze Age copper mines in Great Britain and on the continent. Whereas Skjølsvold considered the 60 pine shovels to be similar to Late Iron Age spades, the hollow blade parallels a shovel from the Great Orme copper mine in Ireland (O'Brien 1994: 144–7). The only difference is that the Bubakk shovels were long-handled. The two fragments of worn-out grooved hammer stones from the debris layer also deserve some attention. On the basis of the dates from the quarry, Skjølsvold (1969: 223) argued that the use of hammer stones continued into the Iron Age in Kvikne. It is not immediately clear what purposes the hammer stones would have served, since bronze or iron tools with a hollow edge appear to have been used to carve out blanks in the quarry (Skjølsvold 1969: 210; Østerås 2004a). Unlike most other mauls, the hammer stones are made from steatite. I find two explanations equally plausible: the hammer stones are remnants from an earlier phase of quarrying, or, they were used for another purpose such as to break loose the carved-out bowls.

Investigations in 2004 resulted in the find of a new panel with rectangular cavities (Østerås 2004a, b). The cavities, measuring a maximum of 18–26 cm in general, are considered too small to have produced rectangular vessels or ashlar stones (Østerås 2004a: 17). Instead, Bodil Østerås suggests that they stem from the production of Bronze Age soapstone axe moulds. The theory of mould production finds some support in measurements of the length of Bronze Age mould blanks from Sweden, which span roughly 10–15 cm (Weiler 1994: fig. 124), whereas larger axe moulds are known from the early part of the Scandinavian Bronze Age, up to 26 cm long (Brinch Madsen *et al.* 2003: 380). Thus, when some loss of material from bedrock to rough-out is allowed for, the size of the cavities is consistent with that of Bronze Age moulds.

The quarry's proximity to copper sources which were mined in historical times, some of which are within sight of the quarry – notably the Børsjøhø mines 4–5 kilometres to the south – does not make it less interesting. Pyrite is also present at the soapstone pediment, and has been mined only a hundred metres from the quarry. Since copper in this part of Hedmark relates to pyrite deposits it is perfectly possible that copper has been available at the quarry itself, or at least within close reach. Taken together, a number of essential prerequisites for copper and bronze production are present in Sandbekkdalen: access to copper and soapstone, and relevant technology and knowledge to exploit these resources. The latter is supported by the documented quarrying techniques and the presence of types of tools connected to Bronze Age copper mining, knowledge about soapstone's special abilities, and – if the theory of mould production is correct – direct evidence of knowledge related to metal production. Distribution patterns for Bronze Age soapstone moulds in Scandinavia indicate that such production was probably aimed at a larger market than the local (Weiler 1994: 129–30). An estimated production of 3000–4000 vessels, or perhaps twice as much, was previously considered mass production aimed at export (Skjølsvold 1969: 213, 226). Although new estimates are more modest, there is little doubt that the activity in the quarry was tremendous compared with how little is revealed about the production by other archaeological finds, as no such vessels have yet been found elsewhere in Kvikne. This must be a warning against drawing conclusions, and thus defining an area as peripheral, on the basis of lack of evidence.

Turning to other find categories, however, there are clear indications that the populations of the inland forest and steppe region participated in inter-regional networks. Several Bronze Age metal hoards from river valleys in Trøndelag and Hedmark have been considered evidence of prehistoric traffic between the southeast and northwest along the rivers Glomma and Orkla/Gaula, which connect the Oslo fjord (or Oslofjorden) area to the Trondheim fjord (or Trondheimsfjorden). The LBA VI Stavå and Gunnesøy finds from Sør-Trøndelag county are particularly relevant: both were deposited by rivers, and both fulfil the criteria for a smith's hoard. The Stavå find contained a combination of jewellery and newly fabricated socketed axes, and the Gunnesøy find a varied repertoire of jewellery and weapons, and a metal-working puncheon (Gaustad 1965: 120). Sticking to the traditional explanation, the hoards may be remnants left by metal smiths travelling along the inland route. If this is really the case, the smiths were in fact passing through Kvikne in an era when the Bubakk quarry was in operation. A rare LBA VI bronze neck ring found near the old road between Kvikne and Rennebu roughly a hundred metres south of the border to Sør-Trøndelag also indicates international contacts. Although the type occurs in Denmark, the rhombic cross-section is only paralleled in German finds (Jensen 1997: 61–2, 162).

At the other end of the time scale, four simple shaft-hole axes and two heavily used flint projectiles made from daggers point towards contacts out of the region in the

Late Neolithic–Early Bronze Age. When it comes to metallurgical beginnings, an axe of Middle Neolithic origin from Taksgården in Kvikne is of particular interest. It is of a rare kind reckoned to be a copy of copper axes. Anders Hagen (1946: 17) suggested that it had been left behind by passers-by hunting or raiding in the area. Instead of considering the axe as a symbol of metalwork, it is perhaps equally plausible, as has been suggested for comparable axe types in Sweden (Janzon 1986), that it was left behind by metal prospectors. Nevertheless, I do not find the traditional explanation that the precious items were left by travellers satisfactory. Rather, I consider the finds as testimonies of networks linking Kvikne to other parts of northern Europe, networks that may have been nurtured by the exchange of a variety of products made from local resources – soapstone and copper being evident candidates.

Another often-cited example of east–west traffic through the region is the flanged bronze axe that was unearthed in a hillside at the farm Veen in 1867 CE (see Figure 5.3). The axe does not fit well into southern Scandinavian typology, sharing traits with axes of Vandkilde's classes A and C. The butt has stretch marks from hammering and there are casting flaws on the face, a trait usually found on locally fabricated axes (Vandkilde 1996: 107). Is this a locally produced east Norwegian axe type, as suggested by Fredrik Gaustad (1965: 35)? Judging from Kvikne's peripheral location and the low potential for agriculture, an early metal axe and the possibility that it was a local product deserves some attention. We need to consider whether the axe's presence may have something to do with the rich copper resources in the area and whether the metal could have come from a local source. The previously mentioned Kvikne mine is situated on a hillside less than five kilometres southeast of Veen as the crow flies. At Kaltberget, close to the mines, there are extensive remains of vessel production, although not archaeologically dated. The situation is thus very much the same

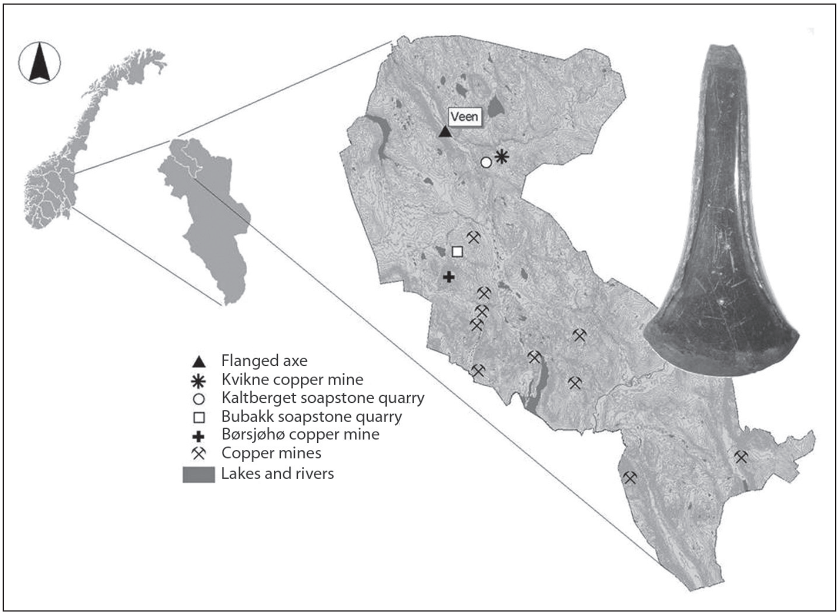

Figure 5.3 Overview of early modern copper mines and prehistoric quarries in Tynset, Hedmark. Flanged axe from Veen (C4386). Photo by Lene Melheim.

as in Sandbekkdalen farther south: copper-bearing pyrite ore and soapstone available within close reach. According to trace elements, the Kvikne axe falls into SAM's metal type FA, which is not very common in Denmark in EBA I, or Liversage's larger grouping of "AsNi" metal – with arsenic and nickel as the main impurities – which has been linked to an Alpine centre of production (Vandkilde 1996: fig. 44; Liversage 2000: 74). An alternative interpretation is that it may derive from a variety of different pyrite ore sources (Northover 2008: 5). Interestingly, the copper deposits in the Kvikne region are examples of such ore sources. In order to resolve the question of the axe's provenance, lead isotope analysis is required. However, analyses available from the dump heaps in Kvikne show clearly that both nickel and arsenic is present (Melheim 2012: 393). In the historical mining era, the Kvikne copper was renowned for its high arsenic content, released as poisonous gas by fire-setting and a serious threat to the miners' health (Østigard 2002). At present two explanations seem equally plausible: that the axe was manufactured in the Kvikne area from local ore, or that it derived from imported metal cast in Kvikne or elsewhere in eastern Norway. Whether the axe was made from local copper or not, it informs us that metal circulated in the area at least from the onset of the Bronze Age, a fact that – if we choose to ascribe the material culture to local practices instead of traffic *through* the area – contributes to contextualizing the activity in the soapstone quarry, and also implies that metal was a sought-after commodity in a region otherwise dominated by hunter–gatherer practices. The Middle Neolithic shaft-hole axe from Taksgården is another archaeological teaser that may hint at the existence of metal networks or prospecting expeditions at an even earlier time in Kvikne's prehistory.

Considering Kvikne a potential copper-producing scene, we need to take a closer look at the hammer stone material. In general, Hedmark has the strongest concentration of hammer stones in southern Norway and altogether 11 mauls have been found in the Tynset region. Looking away from the fragmented, untypical mauls from the quarry, weights vary from 516 to 2343 g, thus matching the ranges common in Bronze Age mines (e.g. O'Brien 1994: 124). Judging from wear marks, all have been subjected to moderate to heavy use. Due to the documented use in the Sandbekkdalen quarry I find it highly reasonable that the hammer stones in this region are remnants from some form of quarrying, possibly copper prospecting or mining, which is in accordance with the general opinion elsewhere in Europe, where hammer stones are regarded as the first specialized copper-mining tools in the Late Neolithic–Early Bronze Age (e.g. O'Brien 2004).

In Norwegian archaeology, the traditional opinion that hammer stones are tools used by hunter–gatherer-groups of the interior for fishing/hunting and bone-crushing (e.g. Brøgger 1909: 86; Bjørn 1934: 18; Gjessing 1942: 72; A. Hagen 1946; Indreko 1956: 18–73; Solberg 1989: 97) still has a strong standing. From a bird's eye view, it may be stated that heavy hammer stones cluster in areas with copper resources (cf. Stenvik 1988). From a frog's perspective, however, it appears that hammer stones tend to cluster by waterways. The distribution pattern has frequently been used as an argument to support the fishing–hunting theory, the hammer stones being interpreted as ethnic markers for the groups exploiting the river/lake and forest resources. Although I do not agree with this interpretation, the Kvikne example clearly supports the assumption that metals and metal culture were not restricted to agriculturalists of the coastal regions.

Compared with southwestern Norway, this inland forest region has very different natural, spatial and historical preconditions. Nevertheless, the cultural dualism model was near at hand also when it came to describing variations in material culture within Bronze Age Hedmark: metal-consuming farmers in the agricultural districts versus metal-ignorant hunter–gatherer groups in the interior (e.g. A. Hagen 1946). Despite severe critique of the cultural dualism theory's simplifying and outdated static view of culture, recent investigations into Hedmark's prehistory seem to confirm the existence of a long-term cultural border or meeting zone in Hedmark, which can be traced back to the Late Neolithic (Amundsen 2005, 2011). Stating that Sámi and Norse identities were established in this area in prehistoric times, as implied by some (Odner 2000; Bergstøl 2008) is, needless to say, controversial (in southern Norwegian archaeology), but amply illustrates that any investigation into regionality and culture soon leads to a discussion of ethnicity. There is not enough space here to go deeper into the troublesome topic of ethnicity. Suffice it to say that in terms of Bronze Age metallurgy, it seems that economic adaptation and cultural practices like agriculture and hunting–gathering were not determining factors, and nor was, as implied by Weiler, ethnicity. As indicated both by historical examples (Stenvik 1988: 299) and some of the archaeological examples discussed here, prospecting and metal production may in fact very well have been part of hunter–gatherer practices. This is partly in keeping with the theory formulated by Egil Bakka (1976), for example, that two grand metallurgical traditions affected Norway in the Bronze Age, that is, the Nordic and the Arctic traditions.

Two grand metallurgical traditions?

In a still wider perspective, Bakka's Nordic and Arctic traditions are encompassed by the larger and yet more long-lived Western and Eastern metallurgical traditions – the former can be defined as the metallurgical centres of central Europe from which metals and metallurgy are supposed to have reached Scandinavia in the Late Mesolithic–Early Neolithic (Klassen 2000: 252–5), the latter as the Circumpontic metallurgical province associated with the large copper producers of the Volga/Ural area, with an impact area in Fennoscandia among Comb or Asbestos ware hunter–gatherer groups (Bakka 1976: 10; Halén 1994: 160–61; Chernykh 1992: 185). In the Late Neolithic–Bronze Age, metallurgical innovation is linked to the westerly Beaker phenomenon and the easterly Ananjino culture. The Rogaland and Hedmark case studies demonstrate that it is impossible to label any of these solely Nordic/Western or Arctic/Eastern. It seems rather that approaching this general, yet complex, larger picture is impossible without scrutinizing the smaller at the same time. To add to this, two very different examples of Bronze Age metalworkshop sites – the Skrivarhelleren rock-shelter in the sub-Alpine Årdal area and Hunn in the rich Bronze Age agricultural landscape of Østfold – will now be addressed.

Discussions of the use of caves and shelters in Norway have centred around two contradictory explanatory models (cf. Nordenborg Myhre 2004: 54–6): the culture-dualistic idea that they were dwelling places used by groups with an economic adaptation and/or ethnic status that differed from that of the farmers, or that they were used seasonally by a settled population with a mixed economy, who exploited a range of different resources. Crucial for this discussion is the presence or absence of materials typically present in the farming landscapes (e.g. metals). Concordantly, evidence of metal production in rock-shelters has been linked to the farming population and their networks. Skrivarhelleren was among other things used as a workshop for melting and casting bronze in Late Neolithic–Late Bronze Age (Prescott 1991, 2006), and the evidence from the shelter thus demonstrates that metallurgy was mastered also in seemingly peripheral regions – far from the centres of consumption. Christopher Prescott (1995) has argued that the use of mountain areas should be seen in light of patterned seasonal migration between farms and pasture lands. However, as recently demonstrated by Prescott (2006: 188), copper ore and native metals were within reach less than a day's journey from Skrivarhelleren and may have been exploited by the people visiting the shelter. Faunal material coming from the fjord as well as lowland lakes of the interior indicate that the visitors to the shelter participated in networks with groups from several different regions. Movement between west and east in this phase is perhaps also indicated by the distribution of flint daggers and early bronzes along the historical route through Valdres and over Tyin (Prescott 1991: 118). In light of this, the hypothesis of copper production opens up for a different scenario: that the shelter was used for expeditions to or from Årdal, aimed at exporting or fetching indigenous ore. Finds like a LN I flint dagger, a slate chisel pendant with oblique bi-conical perforation, bone beads and an early bronze rivet in Skrivarhelleren may be understood as belonging to the northwest European Beaker sphere of interaction (cf. Prescott 1991: 59, 72, 118; Sarauw 2008). As with the scenario outlined for the southwestern coast, it seems possible that groups in Årdal encountered and adopted metallurgy through a southern Scandinavian/western European Beaker network, or, arguably that Beaker groups from the Continent visited this prosperous mountain region. Far from wanting to reintroduce an culture-dualistic model for the rock-shelter phenomenon, I simply want to point out that the increased use of caves and shelters from the Late Neolithic may also relate to activities like prospecting and mining, and suggest that the people who utilized some of these cold and shadowy shelters for temporary stays may among other things have been individuals or groups on prospecting expeditions, or, alternatively, people travelling with metals. More recently, Prescott (2009: 9) has hypothetically attributed an Ananjino Late Bronze Age spearhead found in Luster in Sogn to visiting metallurgists from the Urals. In light of the readily available ore deposits, it seems possible that this prosperous region could have attracted prospectors from different areas, regardless of their Nordic or Arctic, Western or Eastern, affinity.

Remains from casting in mountain and inland regions indicate that metallurgy was far from limited in scope. Nevertheless, judging from the presently available evidence, it still seems that workshop finds generally cluster in agricultural regions (e.g. the previously mentioned Stavanger area and also Østfold at the eastern coast; see Figure 5.4). The regular occurrence of bifacial arrowheads of flint or quartz/quartzite at metal workshops in Sweden (Goldhahn 2007) is a repeating pattern also in Norway, e.g. at the rich Bronze Age workshop at Hunn in Fredrikstad (Skre 1998; Prescott 2000; Anfinset and Melheim 2001; Anfinset 2006). Large-scale production of bifacial arrowheads is documented at highland sites, such as in Årdal (Prescott 1991: 44–7, with references). There are several ways of explaining these regional patterns and the concurrence of metallurgy and arrowheads. One possibility would be that they represent specialized production based on the export of raw metal (and arrowheads) from copper-producing

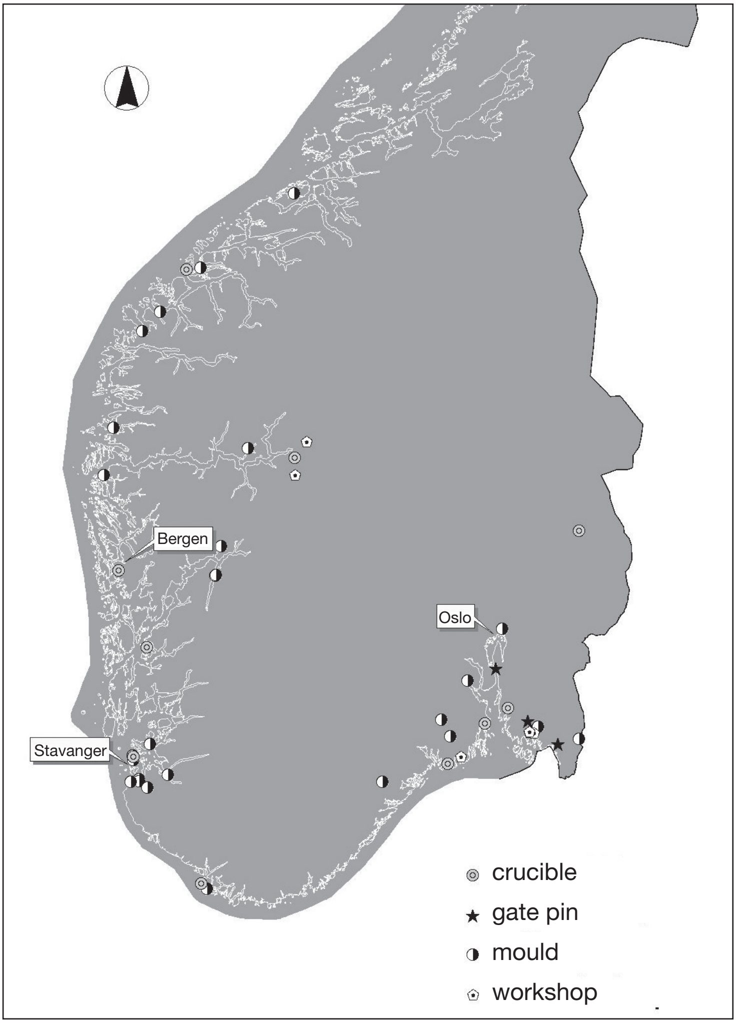

Figure 5.4 Distribution of metallurgical finds in southern Norway.

groups (hunter–gatherers?) in inland mountain areas to the bronze-consuming farming communities of the lowlands and coast. If that really was the case, what would the implications be for the aforementioned archaeological image of Bronze Age centres and peripheries? Apparently the theory of indigenous mining argued for here is not necessarily at odds with the premises inherent in the traditional Bronze Age chiefdom model: that outfield resources were drawn to the rich agricultural centres of consumption from the (less affluent) producers of the hinterland (cf. Johansen 1981: 161–3). This, again, is based on the idea that at this stage in history the area of accumulation/consumption did not strictly overlap with that of production (Larsson 1986: 20–21), which – as seen in the example of Karmøy/Jæren in Rogaland – has been reproduced also by scholars arguing for indigenous production. The theory of indigenous mining does however make a big difference when it comes to the hierarchy between consumers and producers implicit in the centre–periphery model, not least the determinism inherent in the model. Whereas Rogaland is an area where both the demand for and supply of metals seem to have been present, other areas bearing promises for prehistoric copper mining – Årdal, Kvikne and Bømlo – are areas that have traditionally been considered peripheries or hinterlands to the bronze-consuming landscapes. For one thing, the scenarios outlined here amply illustrate that the centres of consumption must have been strongly dependent upon the centres of production. Far more important, however, is that in terms of the transferral and evolution of metallurgy in southern Norway, the examples clearly indicate that neither the traditional division between central areas with metal culture and peripheral areas without, nor that of metal-consuming centres and metal-producing peripheries, cover the complexity of the prehistoric situations: a blend of local premises and traditions and inter-regional impulses.

Concluding remarks

The two different scenarios of Bronze Age metal production demonstrate that the cultural diversity model is insufficient when it comes to understanding the metallurgical trajectories of the north. Future identification, excavation and dating of mines may contribute to understanding some of the problems and questions approached in this chapter. But not all. To answer them and start asking new questions that can help us understand the complexity of the Bronze Age world system, we need to establish a more dynamic view of the role of those regions that are rich in copper, but poor in bronze. I believe most scholars today agree that Bronze Age globalization can only be understood by investigating the many *different* regional trajectories and the dynamics between the manifold interacting regions. To accomplish this, we need to investigate not just the spread of technology and goods from centres to peripheries – or, arguably, the other way around – but also social mechanisms involved in the acceptance (or rejection?) of new innovations.

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6

On the bronze trail: short-cuts, byways, transformation and displacement

Ørjan Engedal

Bronze haunts students of the northern Bronze Age periphery – too much to ignore, too little to make much sense of. Might there not be advantages in studying the end of the Bronze Age world? Might not the rarity of bronze, the unforgiving topography and harsh seas provide the northern periphery with an edge, methodologically speaking?

I believe they do, but in order to embrace these opportunities we need to re-evaluate our strategies, procedures and perspectives. Those that we have are focused on broad patterns, large quantities and long time spans, and they make use of hazardous short-cuts from these patterns to society. We need strategies and perspectives that deal with the few, the extraordinary and the short term – a particularistic methodology. That the long-term is an asset in itself, exclusive to the discipline of archaeology, is an illusion. Only through studying situational and shorter rhythms of time will archaeology be able to build bridges and tap into the insights of cognitive psychology, social anthropology, sociology and history. Only through meticulous explorations of this byway will we be able to fulfil the ultimate aim of archaeology as the study of humanity in the long term.

Transformation and displacement

Bruno Latour has criticized the social sciences for using "social" and "social structure" as if they were concrete materials in order to account for other states of affairs. He argues that in general they do not trace enough relations necessary to account for a given phenomenon; rather they use hazardous short cuts from narrow data-sets to social constructs (Latour 2005). Latour's critique of the science of the social is readily applicable to archaeology. The short cuts conventionally made in archaeology are no less hazardous, typically from hunting gear to "band" and "egalitarian", and from bronze to "chiefdom" and "hierarchical". A serious consideration of Latour's critique would mean that we start exploring the full chain of associations, getting from the raw flint block, via the arrowhead, shaft and bow, via the hunt and kill, to the distribution and further transformation of meat, antlers, skin and sinews. It would mean that we trail along with a lump of copper from a mine in the eastern Alps to a sub-alpine valley of northwestern Scandinavia.

The artefact confronts the archaeologist with two major challenges: the *transformation* and the *displacement* of matter. If we cannot discern acts of transformation and displacement with a distinct human signature, we do not register, document or bring into our museums the phenomenon in the first place. And it is here, I believe, that we will find a point of departure for a particularistic methodology for studying human history from artefacts. The societies we conjure up at the end of our literary accounts ought to face the simple test: are they able to displace and transform matter in a way consistent with the archaeological data?

As a case study I have chosen the beginning of the Bronze Age at the northwestern fringes of the Nordic and Continental Bronze Ages, around 1700–1500 BCE. Bronzes in the periphery often pose greater challenges and discrepancies than bronzes in the centre, simply because they have been moved further from their origins. But no one is really dedicated to doing justice to the discrepancy presented by the peripheral bronze artefact; continental scholars are busy accounting for their own bronzes, and northern scholars have a tendency to cut off and amputate the trajectory of transformation and displacement embedded in bronzes. This is, more often than not, a problem built into our frameworks before research has started. We start out with defining an area, and ramble within the borders of our area (e.g. counties and states). The reason for the popularity of this procedure might be that we are concerned with only *some* humans in the past, having their homes in *certain* areas. It might also stem from a belief that there exist short cuts to the domain of the social, and that detailed tracings of networks leading across the borders of our areas are superfluous. If we lose faith in the short cuts to the social (cf. Latour 2005), there are in my opinion few options left other than a more dedicated search for the trajectories in which ores became artefacts, and for the byways along which artefacts were displaced. This search for byways involves the traditional archaeological virtue of observing difference and similarity in artefacts. As the "social" dwindles in the social sciences, descriptive studies of individual bronze categories such as the German series *Prähistorische Bronzefunde*, long out of fashion, suddenly become highly useful tools in an alternative search for Bronze Age history. Below I will try to adhere to a particularistic methodology and hopefully demonstrate some of its assets. My simple aim is to trace 31 pieces of bronze back to their places of origin, explore the resistance these byways offer to the human body, and see whether this exercise changes our image of the Bronze Age.

The first bronzes

In this study I include bronzes dated before the Nordic Bronze Age BA II, from the coast west of the Alpine plateau of the Scandinavian Peninsula. From BA Ia (1700–1600 BCE) and BA Ib (1600–1500 BCE) I include sixteen flanged axes, six shaft-hole axes, one sword, a bracelet, a spearhead, a dagger and five small bronze fragments. A sword conventionally classified as BA I (Sögel-type) was in fact found with a paalstave of BA II type, and is excluded from this study (Lista, Vest-Agder County; Johansen 1986: 20, 30f.). Also excluded are three flanged axes with extremely high flanges and trapezoid, unflanged neck, type Extreme Oldendorf, dated to BA II: Hegdalsvik, Møre & Romsdal County (T 8929); Indergård, Møre & Romsdal County (T 19145); and Voll, Rogaland

Table 6.1 Bronzes from Nordic BA I in northwestern Scandinavia (based on Cullberg 1968). Asterisks indicate locations east of the mountains.

	Sn (%)	Pb	As	Sb	Ag	Ni	SAM	Liversage “AsNi” and deviances	Comment
Oldendorf axes									
“Haugesund”, S 1648	9.4	Sp	0.36	0.37	<0.01	0.18	FB 1		
Idse, S424	5.3	0.11	0.77	0.09	0.02	0.88	FB 1		
Holen, C 6342	5.9	0.05	0.68	0.24	0.03	0.75	FB 1		
Gjesdal M., C 1645	9.1	0	0.43	0.41	0.02	0.27	FB 1		
Tårland, S 4370	5.5	0.08	0.81	0.16	0.05	0.56	FB 1		
Line B 4911	10.0	Sb	0.29	0.20	<0.01	**0.09**	FG	low As & Ni	
*Engrav, C 29175	10.0	0	sp	sp	sp	**0.09**	FG	low As, Ni & Sb	
Håheim-Steine axes									
Fevåg, T 7852	7.8	0	0.55	sp	0.02	0.44	FA		
Blindheim, B 12125	–	–	–	–	–	–	–		
Blindheim, B 13373	–	–	–	–	–	–	–		
Håheim, B 4191	7.0	0	0.66	**0.77**	**0.55**	0.87	B 2	high Sb & Ag	broken
Kvåle, B 7952	9.1	0	0.33	0.15	~0.01	0.41	FB 1		broken
Steine, B 3295b	8.0	0	0.53	0.1	0.09	0.32	FB 1		broken
Steine, B 3295a	9.2	0	0.39	0.12	0.09	0.34	FB 1		
*Borge, C 11059	6.2	0.05	0.60	0.18	0.12	0.51	B 2		
*Skalstad, C 13875	6.3	0.02	0.69	sp	0.03	0.26	FA		

	Sn (%)	Pb	As	Sb	Ag	Ni	SAM	Liversage “AsNi” and deviances	Comment
Other flanged axes									
Vevang, C 21411	–	–	–	–	–	–	–		
Stokke, S 857	–	–	–	–	–	–	–		
Bersagel, S 7825	–	–	–	–	–	–	–		
*Berge, C 7978	7.2	sp	0.48	0.12	~0.01	0.50	FB 1		
*Rolighet, C 25254	8.9	0	0.41	0	<0.01	0.16	FA	low Ni	
*Øverby, C 21614	7.2	0.06	0.7	0.06	0.02	0.63	FB 1	low As	
Fårdrup axes									
Lågsand, T 14733	10.0	**2.7**	**1.85**	sp	0.07	0.37	FA	high Pb & As	decorated
Hovdeset, T 14102	10.0	**0.77**	**1.6**	0.14	0.04	0.85	FB 1	high Pb & As	broken
Viset, T 20754	–	–	–	–	–	–	–		decorated
Kvanngardsnes, B 5921	8.0	0	0.92	0	<0.01	0.80	FA		
Årekol, B 3389	7.3	sp	0.59	0.32	0.11	0.48	B 2		
Tjelta, S 3664	9.0	0	0.57	sp	~0.01	0.52	FA		
Other									
Blindheim, B 11599	–	–	–	–	–	–	–		
Steine, B 3295c	–	–	–	–	–	–	–		
Æri, B 5212	–	–	–	–	–	–	–		
Skrivarh., B 14186/25	–	–	–	–	–	–	–		fragm.
Skrivarh., B 14186/26	–	–	–	–	–	–	–		fragm.
Skrivarh., B 14186/24	–	–	–	–	–	–	–		fragm.
Skrivarh., B 14186/38	–	–	–	–	–	–	–		fragm.

County ("Skassvatnet", S 4211; cf. Vandkilde 1996: 127f.). Many of the early bronzes have been analysed for metal composition (see Table 6.1, based on Cullberg 1968). They are generally in line with David Liversage's "AsNi" composition with a probable origin in the eastern Alps, possibly from Mitterberg (Liversage 2000: 79). This data alone suggests an extraordinary displacement of matter from the Alps to northwestern Scandinavia. From a closer look at the morphology of the above artefacts it is possible to make qualified guesses as to which route they travelled and to some of the stops they made along the way.

There are six flanged axes with high flanges, narrow edges and parallel sides, fitting the criteria for the Underåre-Oldendorf continuum, and type Oldendorf in particular, dated to BA Ib (cf. Kibbert 1980: 137ff.; Vandkilde 1996: 110ff., 117ff.; Aakvik 2000: 19). These are all located in Rogaland County in the southern end of the area.

There are seven flanged axes with low/developed flanges, parallel sides and wide, curved edges. These axes do not fit comfortably into any of Vandkilde's types from Denmark. Axes with comparable outline are found within the continuum represented by types Torsted-Tinsdahl and Virring (demarcated by size only), but these have waisted sides and transversal bevels at mid-length of the axe (Vandkilde 1996: 97ff.). Although our specimens resemble the continental type Langquaid II (cf. Aakvik 2000: 17f.), they lack the characteristic notched neck (Abels 1972: 244–76; Kibbert 1980: no. 375–97; Vandkilde 1996: 103ff.; Laux 2000: no. 76–82). This group is termed the *Håheim-Steine* type from here on.

There are six shaft-hole axes of Fårdrup type. The axes from Lågsand and Viset are both decorated, while Hovdeset is a broken fragment. The Fårdrup axes have traditionally been dated to BA Ia, but according to Vandkilde's revision of BA I chronology they belong in BA Ib (1996: 227).

The axe from Bersagel has low flanges, narrow edge and slightly waisted sides. This axe, along with the axe from Berge, east of the mountains, has been considered evidence of bronze before the Bronze Age (i.e. from LN II; cf. Aakvik 2000: 18; Groseth 2001: 36). While the Bersagel axe has not yet been analysed for metal composition, the axe from Berge and two more eastern axes demonstrate comparable height of flanges and outline in combination with coppers of "AsNi" type, and tin levels of 7 to 10 per cent (Berge, Rolighet and Øverby in Table 6.1). According to Vandkilde, this copper is extremely rare in LN II (only 1%), but makes up 30 per cent and 90 per cent, respectively, of the sampled BA Ia and BA Ib material in Denmark (SAM Gruppen FA and FB1–2 in Vandkilde 1996: fig. 148–149). That they do not correspond well with Vandkilde's BA Ia axe types (cf. class B, developed low flanged axes, Vandkilde 1996: 92ff.) might indicate that they were made somewhere else, perhaps in Sweden (contra Aakvik 2000: 18; Groseth 2001: 36). Considering the height of the flanges as well as the metal used in the three eastern parallels, it would seem more appropriate to place the Bersagel axe in BA Ia.

The axe from Vevang has developed flanges, a narrow long-stemmed body and a curved edge without edge corners (i.e. "spoon-shaped"; cf. Bjørn 1936: 10; Gaustad 1965: 35). The long-stemmed axe with spoon-shaped blade seems to have originated in a quite circumscribed area in western Switzerland. The relevant types are termed Lausanne, Rümlang and Bevaix, representing a likely chronological trajectory. These types show a peculiar wide and directional distribution eastwards, unlike any of the contemporary axe types, and seem to form a secondary cluster west of the lower Vistula

River (Abels 1972: 95; Mayer 1977; Kibbert 1980; Szpunar 1987; Pászthory & Mayer 1998). Since Abels's study from 1972, several studies of flanged axes have been published in the *Prähistorische Bronzefunde*. I have made a few modifications to Abels's maps in light of these. Following Mayer (1977), one type Lausanne Ib is added from Hainburg a.d. Donau; following Kibbert (1980), one type Lausanne Ib from Roxheim (no. 154) is added; following Szpunar (1987), three type Rümlang and one type Lausanne Ib are added to the Piltsz-hoard (while Abels only included 1 Lausanne var B), the axe from Porzecze is reclassified from type Rümlang to type Lausanne Ib, and one type Bevaix with provenance "Poland" is added. Following Pászthory & Mayer (1998), three Lausanne Ib axes are added from Bayern (cf. fig. 4). Two axes considered authentic Alpine axes of type Rümlang, both decorated, come from Olovsborg, Småland County, and Frommestad, Närke County in Sweden (Abels 1972: 21; Oldeberg 1976: no. 1738, 2679). The Vevang axe along with the Swedish specimens should be dated no later than Br. A2 on the continent, corresponding to Nordic BA Ia. This is suggested by a Rümlang axe in the burial from Thun-Renzenbühl in Switzerland. This axe had a copper inlay with electrum pins ("pale gold", alloy of gold and silver), a procedure paralleled on a rapier in Shaft Grave IV at Mycenae (Abels 1972: 22).

The Steine hoard also contained a bracelet. It is of small child-like size with pointed ends and five ridges, and is clearly at odds with Nordic EBA bracelets (Kersten 1935: 48ff.). A comparable bracelet with seven ridges, also small and child-like, comes from Scania (unknown provenance; Oldeberg 1976: no. 1359). Another comparable bracelet with four ridges was found in the Middle Madarovce layer at the fortress of Nitriansky Hradok in Slovakia, conventionally dated to the transition Br. A2/B1 ("A3") on the Continent, corresponding to the transition Nordic BA Ia/Ib (Müller-Karpe 1980: plate 294; Vandkilde 1996: 143).

From Æri comes a long, slim dagger blade with two rivets with separate rivet heads (i.e. *Ringniete*). It has conventionally been dated to BA I, and it is clearly different from types common in BA II–III (cf. Bjørn 1936: 8).

From Blindheim, in the vicinity of the two axes, comes a metal-hilted sword with a rare socketed hilt (cf. Engedal 2005). The sword is related to the sword in the famous hoard from Nebra in Germany, dated to the transition Br. A2/B1 ("A3", BA Ia/Ib), and to the sword from the burial at Rastorf, Germany, dated to the same transition (Meller 2002; Engedal 2005; Randsborg 2006: 16, fig. 9).

The fragment from Stokka is the edge-section of a flanged axe, but further typological distinctions cannot be made (now lost).

Finally, there are five fragments of bronze from the early layers at the rock-shelter Skrivarhellaren (Prescott 1991). The relevant strata (layers VIII, VI and V) are dated through five radiocarbon dates. A simplified overview of the relations between layers, bronzes and radiocarbon dates (based on information in Prescott 1991; calibrated with OxCal version 3.10) is presented in Figure 6.1. There seems to be a problem with fitting the top sample of layer VIII with the lowest sample from the same layer, even at 2 Sigma calibrations (cf. Prescott 1991: 37). Since the three lower samples are all from pine, it is possible to suggest that the top sample comes from heartwood from old timber (i.e. more than 90 years old; cf. Schwenzer 2002 for a comparable case). In this way all radiocarbon dates with more than 90 per cent likelihood are taken into account. This indicates a rapid formation of layer VIII from around 1780 BCE onwards. The date from layer V yielded 2040–1630 BCE cal. 2 Sigma. Prescott (1991: 37) stresses that layer

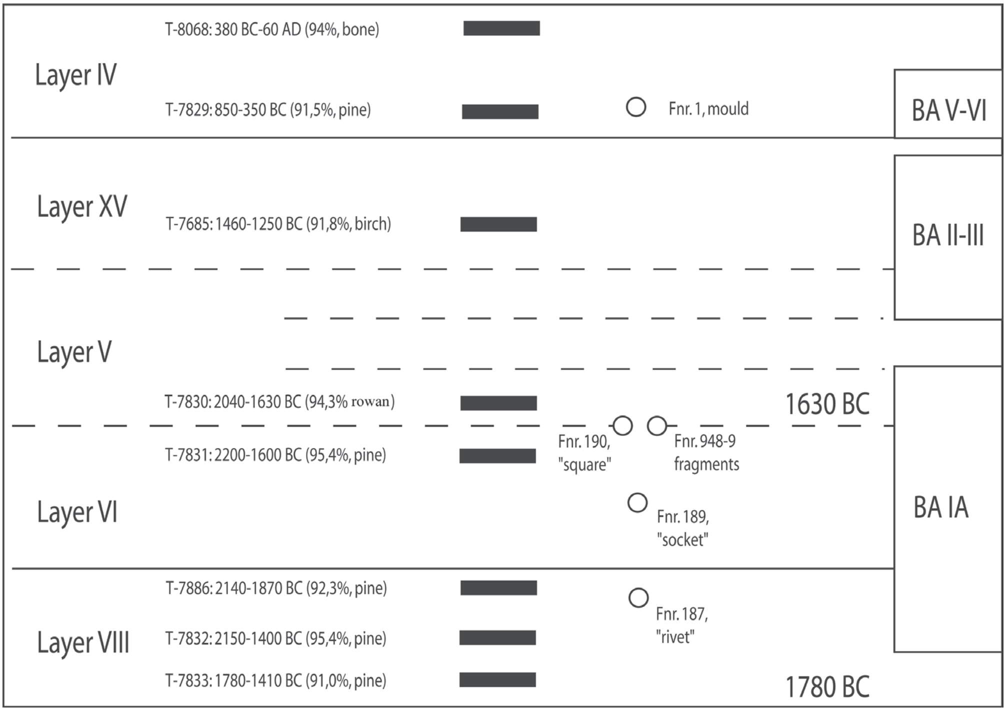
Layer IV
T-8068: 380 BC-60 AD (94%, bone)
T-7829: 850-350 BC (91,5%, pine)
Fnr. 1, mould
BA V-VI
Layer XV
T-7685: 1460-1250 BC (91,8%, birch)
BA II-III
Layer V
T-7830: 2040-1630 BC (94,3% rowan)
1630 BC
Fnr. 190, "square"
Fnr. 948-9 fragments
T-7831: 2200-1600 BC (95,4%, pine)
Layer VI
Fnr. 189, "socket"
BA IA
T-7886: 2140-1870 BC (92,3%, pine)
Fnr. 187, "rivet"
Layer VIII
T-7832: 2150-1400 BC (95,4%, pine)
T-7833: 1780-1410 BC (91,0%, pine)
1780 BC

Figure 6.1 Suggested trajectory of deposits at Skrivarhellaren, Sogn and Fjordane County (data from Prescott 1991).

V was heterogeneous and that this sample was taken from underneath a lens of ashes that probably belonged to layer VI. Considering this date as essentially from the top of layer VI, this layer in its entirety is to be dated before 1630 BCE. To the right in Figure 6.1 is what I consider to be a likely trajectory for the formation of the relevant layers: a rapid formation of layers VIII and VI in between 1780–1630 BCE, then a hiatus, then the formation of the thinner layer XV during BA II–III, a new hiatus, then the formation of layer IV from BA V into the beginning of the Iron Age. I would suggest that it is mainly the transition LN II/BA Ia and BA Ia that is represented in the lower strata, and that the bronzes are linked to the first century of the Bronze Age (compare Prescott 2006: table 1).

The fragment from the higher extremes of layer VIII (Prescott 1991: no. 187), is the head of a rivet, 6.9 mm in diameter, with remnants of asymmetric casting seams and a central pin preserved. The casting seams indicate that the rivet was cast in a bivalve mould built around a model-rivet, probably from wax, which was "lost". The most common rivets in LN and BA I seem to have been rivets that were either "one-piece", hammered into shape at each end, making rivet heads with only slightly larger diameter than the pin (*Pflockniete*; cf. Lomborg 1969: fig. 6; Vandkilde 1996: fig. 193), or "three-piece" (i.e. a simple pin to which was added loose heads of diverse shapes; e.g. *Ringniete*, *Hutniete*). It is difficult to assert how common rivets with one integrated head (i.e. "two-piece" rivets) were at different times in the Bronze Age. At least one good analogy from early BA II can be given (Aner & Kersten 1973–2001: IX, 4493C), and a comparable, but larger, cast rivet was used on the pommel of the BA I sword from Torupgårde (Aner & Kersten 1973–2001: III, 1680). Rivets at this time, LN II–BA Ia, are found mainly on metal-hilted daggers and halberds. Although there are no studies of rivet types available, I suggest that cast rivets of this type were extremely rare at this time.

The second finding (Prescott 1991: no. 189) is a 5.5-mm-long fragment with angular cross-section, presumably from some kind of hollow artefact. It might be a fragment of a spearhead with a rhomboid cross-section, like two of the spearheads in the Virring hoard from BA Ia (Jacob-Friesen 1967: plate 12). It might be from a dagger/sword hilt with a pointed oval cross-section, or from the lower section of a hilt. It could also be that the rivet and this fragment stem from the same artefact, and this would probably be a metal-hilted dagger or sword.

The third finding (Prescott 1991: no. 190) is a square piece with rectangular cross-section. It has a single ornamental dot and deep lines, possibly marks from chopping. The relatively thick massive fragment must stem from a quite large artefact, possibly a shaft-hole axe or perhaps a very large flanged axe, but it is distorted by secondary treatment. The broken axe in the Steine hoard had comparable lines or cut-marks. Interestingly, an axe from unknown provenance in Scania, a close parallel to the Steine axes, had both these features as ornaments: relative large deep dots and short, vertical, well-marked lines (Oldeberg 1976: no. 1127).

From the same level as the square fragment came two microscopic fragments (Prescott 1991: nos 948–9). These were discovered within samples from what was initially thought to be ochre. Analysis indicated that the "ochre" had been heated to 1100–1200°C (Prescott 1991: 78f., 81). This might in fact be vitrified sands or slag from a furnace and is in any case a sure indication of temperatures exclusive to metallurgical activities (Prescott 2006: 186).

Summing up, the bronze fragments from Skrivarhellaren indicate that complex and rare artefacts such as metal-hilted blades and large, decorated objects were broken for the purpose of casting in BA Ia. The flanged axes from Vevang and Bersagel can be attributed to BA Ia. The Fårdrup and Oldendorf axes belong to BA Ib. The Håheim-Steine type axes, the sword from Blindheim and the dagger from Æri are less conclusive in this respect.

The direction of Early Bronze Age networks

Interpretations of Bronze Age society in northwestern Scandinavia have been flawed by short cuts from simple quantitative patterns of bronzes directly to the "social", and by too wide time brackets (EBA and LBA). Furthermore, these short cuts have been made under the influence of three main biases: a causal link between quality farmland and bronze, the dominance of maritime travel (the coastal "north-way") and the primacy of the south. In combination these have created an image in which Jæren in the south dominates with its agricultural production, its dense population, its control of the short maritime route to southern Scandinavia (Jutland) and its control of the redistribution of bronzes to groups along the coast to the north. This is an image and a short-cut so logical and self-evident that there is hardly any need to back it up by data. It *is* backed up by bronze data when the data are treated superficially: in terms of typology and in terms of chronology. If we dive into the particularities of the data and shorter brackets of time, we are faced with patterns, links and directions that are less self-evident.

There are significant arguments against the idea that the first bronzes north of Rogaland County arrived along the coast via Jæren and northern Jutland (cf. Aakvik 2000). There is a clear-cut typological difference between flanged axes north and south of the Hardangerfjord. Except for the single Fårdrup axe in Rogaland County, there are in fact no typological features in common between the north and the south. It seems that Jæren was not involved in introducing bronze to the northern coast. Either these bronzes arrived via a southern maritime route that bypassed Jæren, or they arrived across the highlands from the east. Several features throw doubt even on Jæren's procurement of bronzes via the shortest route from northern Jutland. There are only five Fårdrup axes in Jutland north of the Viborg-Randers line, and nine axes north of Århus (cf. Vandkilde 1996: fig. 242). The Fårdrup axe from Tjelta at Jæren has, along with the two northernmost specimens from Lågsand and Hovdeset, extraordinarily high tin levels at 9.0, 10.0 and 10.0 per cent, respectively (see Table 6.1). Out of 61 sampled Fårdrup axes from Denmark, only two (and one without provenance) have tin levels of 9 per cent or more (i.e. 9.1 per cent and 9.8 per cent), from eastern Zealand and Lolland (Vandkilde 1996: nos 651A and 705A). Among the 11 sampled specimens from Scania, on the other hand, no less than seven axes contain more than 9 per cent tin, five of which contain 10 per cent or more (Cullberg 1968: nos 568–570, 592, 634, 652, 755). This is a strong indication that the Tjelta axe arrived from the east, along with the other western specimens. The axes from Bersagel, Idse, Stokke and Gjesdal are found to the north and east of Jæren proper. Except for the Fårdrup axe from Tjelta, there are only three bronzes from the high-quality farmlands of Jæren, the axes from Tårland, Line and Holen. In Jutland, north of the Viborg-Randers line, the Underåre type is relatively numerous (13), but type Oldendorf quite rare (5; cf. Vandkilde 1996: fig. 93). The flanged axes from Jæren are of type Oldendorf rather than type Underåre.

The low nickel level of the Line axe is only replicated in three out of 74 analysed Oldendorf axes from Denmark. An Oldendorf axe from Engrav, just east of the mountains, has an identical nickel level, suggesting that at least the Line axe was brought from the east. Moreover, none of the axes from Rogaland have transverse bevels. This feature is common on Danish axes in both BA Ia and Ib, especially on types produced locally (Vandkilde 1996). Finally, the Bersagel axe seems to be at odds with shapes prevalent in Denmark. It is better linked to eastern axes from Berge, Rolighet and Øverby, dotting a trail from inner Boknfjord across the plateu to the interior east of Oslofjord. Summing up: there are few, if any, clear indications that bronzes arrived from northern Jutland, or that Jæren redistributed bronzes to the north. There are on the other hand several strong indications that bronzes were procured via inland routes across the highlands from the east, and even that Jæren procured bronzes from the north rather than the other way round. It would seem that central European metal was displaced along rather long and winding byways, far from our common-sense considerations based on modern maps and logistics.

Thus, if we set out to meet the challenges of displacement embedded in the early bronzes, discerned through the conventional archaeological tools of typology, spatial distribution as well as metal composition, the focus on the maritime exerts between

Jæren, Lista and Jutland is a fallacy. This manoeuvre might get us flint daggers, but not bronze. Nor are the challenges met by merely turning our attention from the coastal "north-way" to the highlands and the east: first, there are no Fårdrup axes between the mountains and river Glomma, and there are only four axes between Glomma and Lake Vänern/River Göta. Only east of Lake Vänern is there a significant number of Fårdrup axes. Second, the five western Håheim-Steine type axes can be related to two axes between the mountains and Glomma (Skalstad and Borge; Aakvik 2000: 18), and to several specimens in Sweden. Still, nowhere else do comparable axes occupy such an exclusive position relative to other types. The small bracelet from the Steine hoard and the axe from Vevang have no parallels west of Lake Vättern/River Lagan. There seems to be a significant void between the western coasts and fjords on the one hand and eastern central Sweden on the other. In order to face the challenge, we must decide whether we believe that (i) this situation mirrors the relative spatial distribution of bronze-types in the past, like tips of an iceberg, (ii) the relative distribution is distorted by modern activities such as demography, farming and archaeological investigation (i.e. there are ice-tips yet to be discovered), or (iii) the relative distribution was distorted by depositional practices in the Bronze Age (i.e. that significant middle-men existed to the immediate east, but that these did not dispose of their bronzes in the same way as westerners). In this case I am in favour of the first alternative, since the challenging data is not found in the areas with high modern activity at Jæren and around the Oslofjord, but rather in areas thinly populated in recent history. Accordingly, I believe bronze was moved across the Scandinavian Peninsula, and across the eastern lowlands of Norway, by either a western or central Swedish party in rather direct long-distance journeys.

As soon as we lose faith in the short cuts from bronze to the social (e.g. "clusters of bronzes equals social stratification"), the above patterns make a difference. If we are to trace bronze, it is relevant to our journey whether we face the risk of broken skis or freezing to death in surprising blizzards on Dovre in the highlands, capsizing on the rapids of river Lågen in the eastern lowlands; or side-winds and high waves splintering our boat against the cliffs at Stadt or Jæren along the coast. Additionally, the scene in which bronzes went from one person to someone else ought to make a difference for our account of the exchange, whether we are feasting at a large rock-art centre in eastern Sweden, at the shores of Lakes Vättern, Vänern or Mjøsa, or at Limfjord on the other side of Skagerak. In summary, the above lines of arguments convince me that in order to meet the challenge posed by early northwestern bronzes (i.e. the *displacement* part of the challenge), we need to link the west coast to the area east of Lake Vänern. The links and mechanisms we construct must either create arenas for learning melting, casting and moulding techniques, *or* we must be ready to bring people who knew these things from the east across the highlands to the west. We have to make sure that such skills are present at Skrivarhelleren in the seventeenth century BCE.

On the bronze trail

It might be useful to sketch at least one of the paths likely to have been used for bringing bronze into the west (see Figure 6.2). One of the most comfortable routes across the mountain plateau is from the Moldefjord across Lesja. From the estuary of River

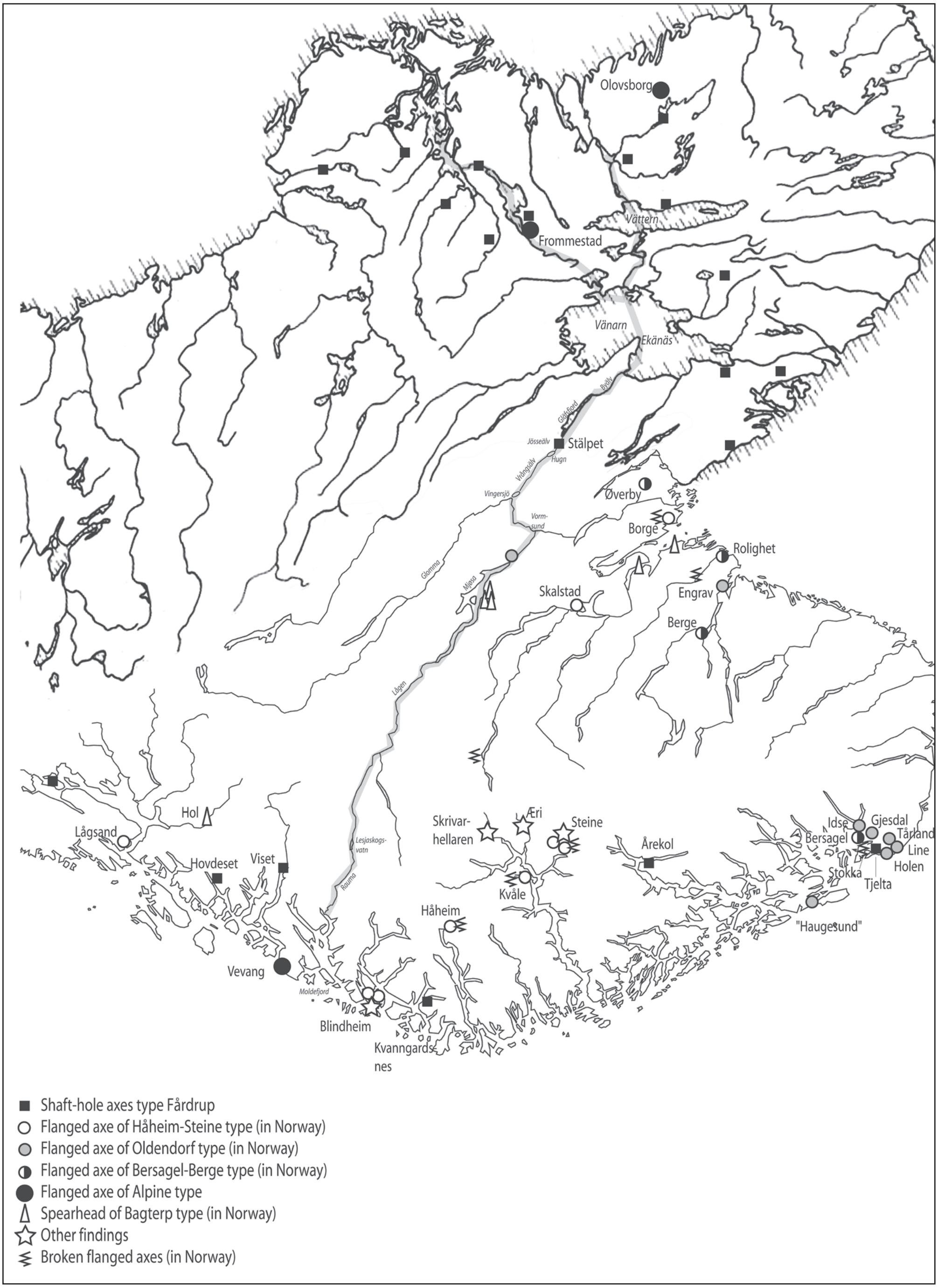
Olovsborg
Frommestad
Vättern
Vänarn
Ekänäs
Byälv
Glåfsfjord
Jösseälv
Stälpet
Hugn
Vrångsälv
Vingersjö
Vorm-
sund
Øverby
Borge
Rolighet
Glomma
Mjøsa
Skalstad
Engrav
Berge
Lågen
Hol
Lågsand
Hovdeset
Viset
Lesjaskogs-
vatn
Rauma
Skrivar-
hellaren
Æri
Steine
Årekol
Kvåle
Håheim
Idse
Gjesdal
Bersagel
Tårland
Line
Holen
Stokka
Tjelta
"Haugesund"
Vevang
Moldefjord
Blindheim
Kvanngards-
nes
■ Shaft-hole axes type Fårdrup
○ Flanged axe of Håheim-Steine type (in Norway)
● Flanged axe of Oldendorf type (in Norway)
◐ Flanged axe of Bersagel-Berge type (in Norway)
⬤ Flanged axe of Alpine type
△ Spearhead of Bagterp type (in Norway)
☆ Other findings
≷ Broken flanged axes (in Norway)

Figure 6.2 Bronzes from Nordic BA I in northwestern Scandinavia. The Rauma–Lake Vänern route is marked (only selected artefacts are plotted east of the mountains).

Rauma a path winds 40 km up the steep "Bear-climb" (*Bjørneklev*) to Stuguflåtten, proceeding through calmer terrain 28 km to the source of Rauma, Lake Lesjavatn at 611 m above sea level (Standal 1996: 106ff.). This is likely to be a two-day journey, and from this point it would be possible to paddle the 10-km-long Lake Lesjavatn. From its eastern end the River Lågen starts, flowing 204 km into the 117-km-long Lake Mjøsa, proceeding another 30 km as River Vorma, before finally joining River Glomma at Vormsund (Årnes). After the western climb, there is thus potentially a 361-km-long water-path available for the daring rafter, descending from 611 to 120 m above sea level during the first 200 km.

Following River Glomma upstream there are several potential paths leading eastwards towards Lake Vänern. Roughly 40 km upstream from Vormsund, River Glomma makes a sharp turn westwards. In cases of high water, Glomma rises above its shores at this point and continues straight ahead into Lake Vingersjø just south of the bend, and flows ultimately into Lake Vänern. From Lake Vingersjø it is possible to combine a number of small rivers and lakes: via River Vrangelv into Lake Hugn, via River Noreälv via Lake Askesjön to Lake Nysockensjön, and then along River Jösseälv into Lake Glafsfjord and River Byälven, through Lake Gilgabergsjön and Lake Harefjord into Lake Vänern. Along this complex river-path, by the rapids Stälpet in River Jösseälv, a Fårdrup axe was discovered during dam-construction (Oldeberg 1976: no. 2627). It is difficult and possibly hazardous to assess how fast it is possible to move by boat from Lake Lesjaskogvatn to Lake Vänern, and how many obstructing rapids there in fact were in the Bronze Age. If modelling on a light skin-canoe, the time used on portage (carrying the boat) around rapids would not be much more than moderate walking-speed (3 km/h for ten hours a day, 30 km/day). If a crew had to make 10 portages of 200 m each, this would not really make a great difference as long as the terrain was plain and there was insignificant cargo. The 511-km-long water-path from the west end of Lake Lesjaskogvatn to Lake Vänern could be accomplished in 17 days at 30 km/day, or 11 days at 50 km/day. From the western shores of Lake Vänern there would be a day's journey to Ekenäs, and another to Torsø on the east coast. Thus, within a total of 15–20 days it would have been possible to reach the east coast of Vänern. From here there would be a 2–3 day journey, approximately 75 km, along the Göta Canal and across Lake Vättern, and 3–4 more days, roughly 100 km, via Motala Ström to the rock-art centre at Norrköping on the eastern coast. Summing up, the above west–east route is estimated to be a journey of approximately 815 km and 20–27 days, and it would thus be possible to move from the western fjords to the eastern coast within a month.

If boats were used, these had to be made, maintained and either carried from the fjords to the mountains or stored/made in the highlands, or even in the eastern lowlands. Skin from reindeer and moose for boat construction would have been available in the alpines and lowlands respectively. Alternatively, cattle might have been used as both pack animals and as a medium of exchange. If using this route, the westerners would have to deal with local groups along Lake Mjøsa. Interestingly, the bronzes along Lake Mjøsa are of an entirely different character (Johansen 1981: 29f., 43): three spearheads of Bagterp type (Håkenstad, C 20881; Tømmerhol, C 28545; and Lerudmyren, C 24120; all Oppland County), a Wohlde-type sword (Hølingstad, Hedmark County; C 26442) and a flanged axe of Oldendorf type (Lynes, Akershus County; C 16304). Both the spearheads and the Wohlde sword point rather clearly towards Jutland rather than Sweden. Our spearhead from Hol could represent the northwestern end of this

Mjøsa–Jutland network. This adds to the impression of complex cross-cutting networks on the Scandinavian Peninsula.

I modelled the journey above on a light canoe and an *insignificant* cargo, but most students of the Bronze Age have agreed that *something* of value was brought along in exchange for bronze. Recently, local coppers have been launched as a potential commodity from the western highlands (cf. Prescott 2006; Melheim 2009). I am sceptical of the importance of local coppers in the above networks. Instead I would stress the importance of the highlands with their combination of a number of fur-bearing species with exotic furs in terms of colour and thickness, and vast, high-quality pastures feeding both large domestic herds of sheep, goat and cattle as well as wild reindeer. The successful control and exploitation of these three elements is a mechanism that might better be able to account for the introduction of bronze to northwestern Scandinavia.

Short cuts and byways

Our vocabulary (e.g. process, influence and diffusion) implies that things, people and skills slide effortlessly, often along the shortest route, through the world. Closer explorations of spatial patterns of archaeological data, as well as the resistance embedded in the topography, rivers and seas, might produce more realistic and qualified estimates as to what was "far", "near", "easy" and "hard" in the Bronze Age, and a greater appreciation of the efforts behind the displacement of bronzes.

Extreme long-distance networks are valuable, and they are costly in terms of time, effort and risk, and thus potentially unstable. I assume that these extreme networks were worth the trouble for the involved parties. The focus on centre–periphery dynamics, asymmetry and centres exploiting peripheries tends to miss a central aspect of such extreme long-distance networks: the crucial participants are not in competition – rather they share an interest in "oiling the chain". The Steine bracelet and the metallurgical knowledge demonstrated in Skrivarhellaren, are indicative of this interest in oiling the network. The "centre" has no interest in keeping complex knowledge secret from the "periphery"; rather inter-marriage, teaching and sharing of knowledge were investments in trying to keep the network intact – making participants arrive at the same time, same place, next year. The small bracelet from Steine might be indicative of the strategic exchange of children for strengthening such a link. Competition is more likely to have been present between groups residing in different fjords and mountain valleys in the west, or between westerners and groups along Lake Mjøsa and the lowlands.

During the LN, the western coast seems to have been linked up in a coastal "northway" network that brought Jutish flint-daggers via Jæren all the way to Alta in the north (Scheen 1979). Why did groups along the west coast start crossing into the central Swedish waterways at the transition to the Bronze Age? When it comes to explanation (i.e. to attributing agency between the elements of the phenomena), our conclusions are necessarily shaped by how many potential agents we manage to bring in (Latour 2005: 72). Changes at the periphery of the phenomena to be explained might have been crucial. A change of obvious interest in this case is an even more extreme linkage discerned through the displacement of Alpine axes: between Lake Geneva in the western Alps and lower Vistula at the Baltic Sea. The entire typological, and probably chronological, gallery of Alpine axes from the early Lausanne type, via the Rümlang type, to the late Bevaix type is represented in the Lower Vistula. In fact, the Bevaix axe from Poland is the only axe of this type east of Lake Neuchâtel (see Figure 6.3). This is an even more extraordinary link than the one across the Scandinavian Peninsula. Which agent was dominant in tying this link, and why was a relationship across this extreme distance kept up for a century? That these two extreme long-distance networks were related is demonstrated by the Alpine axe from Vevang on the western coast, and the two authentic Alpine axes in eastern Sweden. We might as well combine them to a single chain, and discern four crucial nodes or agents involved: the "west Alpine", the "lower Vistula", the "east Swedish" and "west Norwegian". It is even possible to introduce a fifth significant agent through the link between the Rümlang axe with copper and electrum inlays from Thün-Renzenbühl and Shaft-Grave IV at Mycenae. According to the high chronology of Søren Dietz (1991), Shaft-Grave IV (and Late Helladic IA) is dated to 1700–1675 BCE. The importance of a Mediterranean agent might also be seen in the similarity between the peculiar rock carvings at Oppeby, Södermanland County, and the script from the Lipari Islands (cf. Kristiansen & Larsson 2005: 167ff.). Which of these five agents made the decisive exertions that created the network that would bring an Alpine axe to the far northwest?

I would suggest the following scenario: throughout the LN (Br. A1, 2350–1700 BCE), the Únětice culture acted as a buffer between the Baltic and southern central Europe, having the effect that goods from the north, amber in particular, reached the area south of the Danube irregularly and in small quantities. In the eighteenth century BCE persons in the western Alps made the crucial decisions and exertions in order to access the eastern Baltic directly for amber. The route chosen seems to have followed the perimeter of the Únětice culture, and I suspect that the reason for this choice of route was to avoid Únětice territory, and possibly rumours of large amber deposits in the east. The result was a network that not only linked west to east, but one that linked south to north in an unprecedented manner – Baltic amber could now be brought to the Alpine Lakes in larger quantities, and in a predictable manner. The reason for this urge for amber, we might speculate, was its popularity in the eastern Mediterranean. At the Baltic coast Alpine traders touched into another network centred on the Swedish east coast and waterways of the interior, dealing partly in high-quality furs. The southerners' interest in particular pelts (the white ones) spurred agents within the central Swedish network into accessing larger quantities of furs of this particular kind. Such furs were available from westerners that trapped in the high alpines and traded their furs west of Lake Vänern. These westerners had shifted their attention to the east as flint dagger production had decreased in Jutland, and shifted towards Scania and the Danish islands around 1950 BCE (Apel 2001). Thus, the central Swedish and the western networks that had only overlapped occasionally between River Glomma and Lake Vänern were now linked up tightly. The kind of furs that the westerners trapped more than nine hundred metres above sea level increased in value only *after* an Alpine presence at the lower Vistula was established. Thus, central Sweden, largely peripheral to flint-dagger distribution in the LN, became a thriving centre now fuelled by bronze procured from traders at the lower Vistula. Since the central Swedish centre did not have access to amber, I suspect that its success was due to its access to western furs. An intensive activity in the rock-shelter Skrivarhellaren was now instigated. If so, central Sweden could not have become the flourishing centre it became *without its link to western trappers*. If

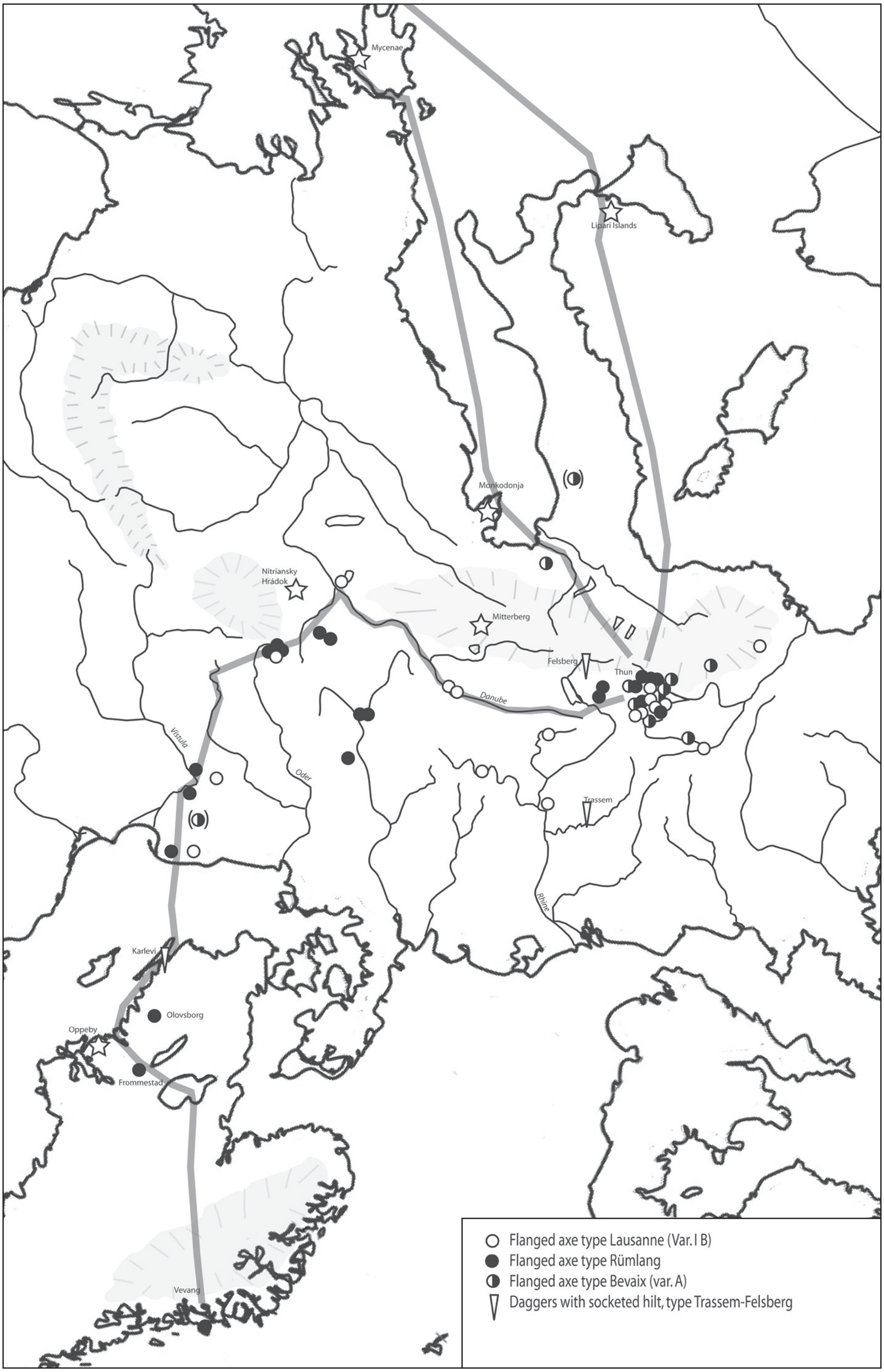
Mycenae
Lipari Islands
Monkodonja
Nitriansky Hrádok
Mitterberg
Felsberg
Thun
Danube
Vistula
Oder
Trassem
Rhine
Karlevi
Olovsborg
Oppeby
Frommestad
Vevang
○ Flanged axe type Lausanne (Var. I B)
● Flanged axe type Rümlang
◐ Flanged axe type Bevaix (var. A)
▽ Daggers with socketed hilt, type Trassem-Felsberg

Figure 6.3 BA I network linking Mycenae, the western Alps, eastern Sweden and western Norway.

the "west Alpine" agents brought amber from the Baltic to Mycenaeans in the Gulf of Venice or Gulf of Genova, did they see that western furs ended up in the shaft-graves as well?

A "yes" to that question brings a host of new perspectives and questions to the European and Nordic Bronze Ages. It would imply that Mediterranean interests in the north were directed only towards commodities from the very fringes of Europe: tin from Cornwall, amber from the Baltic and fur from the Arctic. Probably a gross simplification, but the central European Bronze Age was driven by groups acting as middle-men situated between the Baltic and the Mediterranean. Moreover, from 1700 BCE onwards the white pelts of the western highlands and the Arctic would play a significant role in the dynamics between different agents in Scandinavia and on the Continent.

What became of the BA Ia network, the interaction along the long and winding path from Vevang to Mycenae? The layers above the "BA Ia" layers at Skrivarhellaren were thinner, with no bronzes until a mould from BA V–VI. How did Jæren and Karmøy come to occupy such leading positions in BA II–III from such a flimsy start? No chain is stronger than its weakest link. The extreme long-distance networks of the Bronze Age were unstable, because any of its crucial participants might enter into other constellations, and because the efforts, resources and planning invested in keeping them at work were immense. But this is another story.

Conclusion

Bronze artefacts have been and will remain at the heart of Bronze Age studies. Recent theoretical developments in archaeology and neighbouring disciplines (symmetrical archaeology, actor network theory) promise a return to artefact studies. A stringent focus on human transformation and displacement of matter will ensure that this return becomes something more than typology without perspective and direction or materiality without artefacts. Such a focus will bring a host of new questions that need to be answered through novel methodologies. At last the essential art of archaeology, typology, will have to face up to human sensory experience and the physical world: as tin and copper ores must be brought together and into a flanged axe, and moved through forests and across water and high altitudes from Alpine ore deposits to the shores of the North Sea. I predict that such exercises will force a calibration of the social constructs and history of the Bronze Age.

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Part II

Regions, Globalization and Resistance

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7

Northwestern Russia at the periphery of the north European and Volga-Uralic Bronze Age

Maria A. Yushkova

Introduction

Archaeological sites of the Bronze Age (c. 2000–500 BCE) in northwestern Russia have been poorly studied. The period is represented by few settlements and single finds. At some settlements from that period, traces of bronze casting have been revealed. There are few metal objects from the Bronze Age in northwestern Russia. Despite the relatively poor amount of evidence available at present, we are able to define the general contours of local metal production and to establish its chronology and external connections.

The problems of the Bronze Age and the character of sites throughout the vast areas of northern Europe from central Sweden as far as the Volga-Kama region, including northwestern Russia, were first discussed by Tallgren (1937). Tallgren introduced the term "Arctic Bronze Age" and described its basic features, with the general use of tools made from stone and bone, while bronze was rare. The population were hunting and fishing with a semi-nomadic life, and were involved in trade with foreign merchants. Soviet scholars only partly supported Tallgren's hypotheses. Gurina (1961) later introduced the term "Early Metal Age", uniting the Bronze Age and early Iron Age. In my opinion, Tallgren's terminology corresponds better to the historical realities, and we must admit that the Bronze Age really existed in northwestern Russia, but the archaeological remains of that period are scarce as the level of the development of metal production is low compared with the neighbouring areas.

In the present chapter, a number of finds of Bronze Age metal objects from northwestern Russia are presented. These are considered in the context of the evidence from neighbouring regions and in comparison with information on the products of the Volga-Kama and Scandinavian centres of metal production.

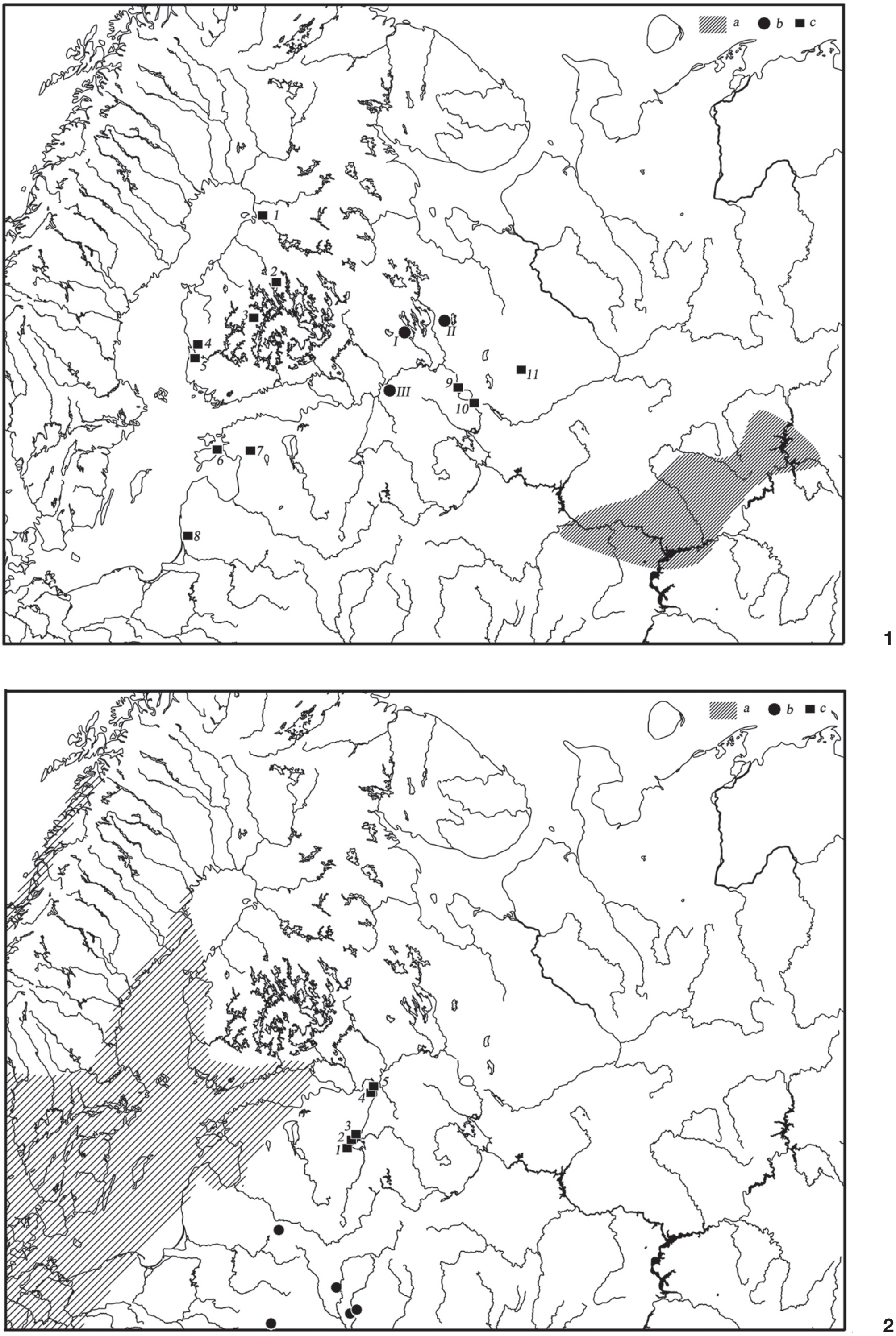
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Figure 7.1 Maps of distribution of artefacts of the Seyma-Turbino type (map 1) and northern European Bronze Age objects (map 2) throughout northwestern Russia. For key, see opposite page.

Evidence of local metal production of the Bronze Age

The Bronze Age in northwestern Russia begins with the appearance of the culture of Textile Ceramics in the second and early first millennium BCE in Scandinavia, Finland, Estonia and Karelia, as far as the central Volga region (Kosmenko 1996a; Voronin 1998; Lavento 2001). At Textile Ceramics sites crucibles, ladles for molten metal and drops and pieces of metal attesting the presence of metalworking have been found. Judging by the types of artefacts, the metal may have been imported here both from Scandinavia and particularly from the Volga-Kama centre of metalworking.

The most noteworthy evidence of metal production found at Textile Ceramics sites is the bronze casting workshop in Tomitsa situated on the northern coast of Lake Onega near the city of Petrozavodsk (see Figure 7.1, map 1, I; Bryusov 1940: 127). At other sites there were fragmentary clay crucibles, such as at Kelka 3 in southeast Karelia (see Figure 7.1, map 1: II; Kosmenko 1996a: 209), fragments of ladles for molten metal and a metal plate of tin bronze (10%)[1] at the site of Ust-Rybezhna 2 in the southeastern Ladoga region (see Figure 7.1, map 1: III; Gurina 1961), and needles and a bronze bead at the site of Shkurina Gorka on southern Ladoga (Yushkova 2003).

Studies of particular objects made from copper and bronze may supplement our knowledge of local metal production, external connections, and the extent of the use of metal objects. These single finds may be subdivided into three cultural and chronological groups; objects of the Seyma-Turbino type, products of Scandinavian provenance and Mälar and Ananino axes.

Objects of the Seyma-Turbino type from the early second millennium BCE

It is possible that the spread of these objects and the appearance of the Bronze Age metal production are linked to Textile Ceramics. In the second millennium BCE artefacts of the Seyma-Turbino type (see Figure 7.2) were widespread throughout a huge area from Siberia as far as Finland. In eastern Europe, Seyma-Turbino burial grounds are found in the central Volga region, on the lower Oka River and around the Kama River (see Figure 7.1, map 1: a). In addition, single finds have been identified west of the basic territory of their distribution, at Lake Beloye in Arkhangelsk Oblast, in Finland and on the Baltic coast. These finds include spearheads, axes, knives and battle axes – so-called *chekans*.

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[1] The chemical analyses of finds cited here and below were conducted by Sergey V. Khavrin at the Commission of Scientific-Technical Examination of Experts of the State Hermitage.

Map 1 *a* – The distribution of cemeteries with artefacts of the Seyma-Turbino type in the Volga-Kama region; *b* – Bronze Age settlements in northwestern Russia where bronze casting has been recorded; *c* – artefacts of the Seyma-Turbino type. *1* – Hangaskangas, Oulu (Ikäheimo 2002: 68); *2* – Pielavesi (Tallgren 1937: fig. 30); *3* – Laukaa (Chernykh & Kuzminykh 1989: fig. 10: 5); *4* – Norrmarkku (Chernykh & Kuzminykh 1989: fig. 4: 5); *5* – Kaasanmäki in Nakkila (Chernykh & Kuzminykh 1989: fig. 4: 3); *6* – Muhu, Estonia; *7* – Toonoja, Estonia (Jaanits *et al*. 1982, fig. 127: 2); *8* – Gribziniai (Chernykh & Kuzminykh 1989: fig. 45: 6); *9* – Nikolskoye, Vologda Oblast (Oshibkina 1987: fig. 77: 3, 6); *10* – Kargulino, Vologda Oblast (Oshibkina 1987: fig. 77: 1–2); *11* – Morozovo, Arkhangelsk Oblast (Oshibkina 1987: fig. 77: 5, 7). *I* – Tomitsa, *II* – Kelka 3, *III* – Ust'-Rybezhna 2.

Map 2 *a* – The distribution of northern European types; *b* – particular finds of this type (according to Kryval'tsevich 2006a, b; Tsyrkunova 2001); *c* – new single finds of artefacts of this type in northwestern Russia. *1* – Townsite of Gorodok, Shimsky region of Novgorod Oblast; *2* – village of Peschanoye in northwestern Ilmen area, Novgorod Oblast; *3* – surroundings of the city of Novgorod; *4* – vicinity of Staraya Ladoga, Volkhov region of Leningrad Oblast; *5* – former village of Veltsy (now Yushkovo) in Volkhov region of Leningrad Oblast.

Two spearheads have been found in Kargulino on the southern bank of Lake Beloye (see Figure 7.1, map 1: 10; Figure 7.2, panel 1: 10; Oshibkina 1984: 23–4; Chernykh & Kuzminykh 1989: 31). The two examples both belong to the so-called Seyma type. According to a more detailed classification developed by Chernykh and Kuzminykh, these belong to the category of KD-30[2] encountered throughout eastern Europe from the Ural region as far as Estonia. Spearheads of the Seyma type have also been found in the Baltic Sea area on Muhu Island, Estonia (see Figure 7.1, map 1: 6; Figure 7.2, panel 1: 6) and in Gribziniai, Lithuania (see Figure 7.1, map 1: 8; Figure 7.2, panel 1: 8). These have been attributed to the KD-32 category.

Another category of Seyma-Turbino objects found in northwestern Russia is knives. During excavations of a medieval barrow in the village of Nikolskoye on the Kema River (near its mouth) north of Lake Beloye, two knives were uncovered (see Figure 7.1, map 1: 9; Figure 7.2, panel 1: 9; Oshibkina 1984: 25). Another saw-knife was recently found during excavations near Oulu in Finland (see Figure 7.1, map 1: 1; Figure 7.2, panel 1: 1; Ikäheimo 2002: 68). This object may be attributed to the NK-18 category, characteristic of which is a simple two-edged lamellar knife with a saw-toothed edge. A total of ten saw-knives are known including the find from Finland. A dagger probably belonging to the KZh-8 category comes from the village of Morozovo situated on the boundary between the Arkhangelsk and Vologda oblasts in the lower reaches of the Vaga River (see Figure 7.1, map 1: 11; Figure 7.2, panel 1: 11; Oshibkina 1984: 25; Chernykh & Kuzminykh 1989: 115–117).

The characteristic Seyma-Turbino bronzes include heavy wedge-like *chekan* axes. Fragments of two such examples come from collections from around the village of Morozovo (see Figure 7.1, map 1: 11; Figure 7.2, panel 1: 11; Chernykh & Kuzminykh 1989: 125). In eastern Europe such artefacts are found exclusively at Seyma-Turbino sites.

In relation to the objects described above, there are also axes without shaft-holes that should be considered. These axes have been encountered in Finland (four items; see Figure 7.1, map 1: 2–5; Figure 7.2, panel 1: 2–5) and Estonia (one item; see Figure 7.1, map 1: 7; Figure 7.2, panel 1: 7). These axes are of the Turbino type found in Kaasanmäki, Norrmarkku and Pilavesi (Finland). A fragment of an axe from Toonoja (Estonia) has no ornamental belt and belongs to the K-4 category according to Chernykh and Kuzminykh's typology (1989: 39, figs 3–7). The axe from Laukaa (Finland) has an ornamental belt in the form of a "horizontal zigzag" and belongs to the Seyma category K-10 (Chernykh & Kuzminykh 1989: 46, figs 10, 5). Axes of this type are widespread mostly in the Volga and Kama region. It is evident that these axes might have come to

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[2] Here and below the typology developed by Evgeniy N. Chernykh and Sergey V. Kuzminykh (1989) is used. It subdivides objects of the Seyma-Turbino type into the following categories: KD (from Russian *kop'ya* and *drotiki*, or spears and javelins), NK (*nozhi* and *kinzhaly*, or knives and daggers), KZh (*kinzhaly*, or daggers), Chk (chekans), and K (celts).

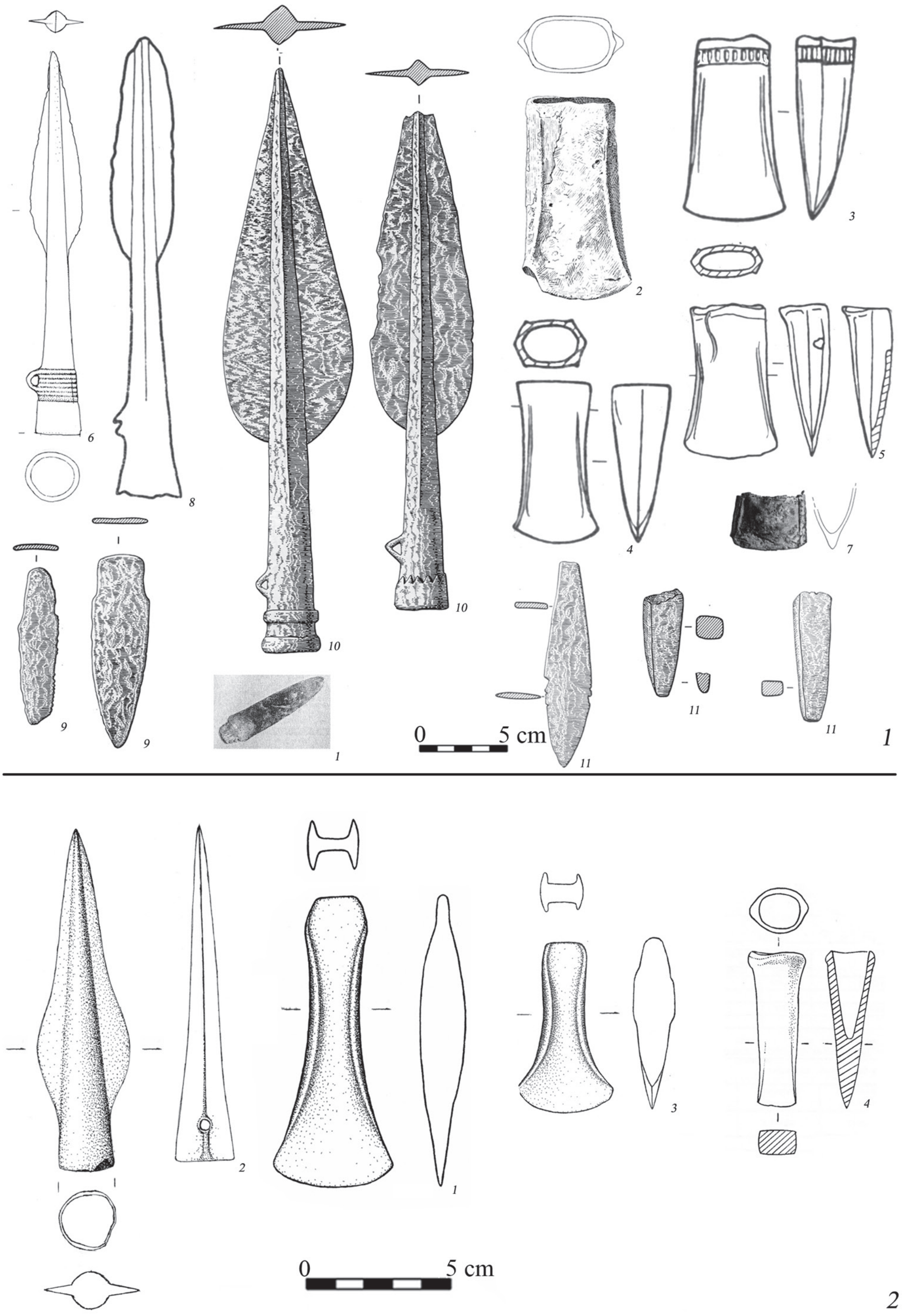
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Figure 7.2 Artefacts of the Seyma-Turbino type (panel 1) and northern European types (panel 2) found in northwestern Russia. The numbers correspond to those on the maps in Figure 7.1.

Estonia and Finland via northwestern Russia. Therefore we may expect that with time Seyma-Turbino bronzes will be found in northwest Russia as well.

The chronology of Seyma-Turbino artefacts is based on identification and radiocarbon dating of Seyma-Turbino sites. Calibrated radiocarbon analyses of material from the Ust-Vetluga cemetery and from the cemetery of Yelunino on the Ob River have resulted in dates between 1950–1870 BCE and 1760–1620 BCE (Yunger & Carpelan 2005). These dates suggest that throughout the area from the central Volga region as far as the Ob River, Seyma-Turbino artefacts existed at the same time in the twentieth to seventeenth centuries BCE. In addition, the Seyma-Turbino culture in the Volga-Ural region is contemporary with the late Abashevo, Sintashta, Petrovka, Potapovo and Pokrov cultures. These cultures span the period of 2200/2100–1800/1700 BCE, according to radiocarbon chronology (Bochkarev 2002: 115).

The level of metalworking represented by the Seyma-Turbino culture exceeded considerably the local eastern European technology. Technologies such as casting objects with a blind socket (axes, spearheads etc.), and the use of tin bronzes and stone moulds were technological innovations in eastern Europe and were the basis for Late Bronze Age metalwork. The further fate of Seyma-Turbino tribes in eastern Europe is not yet quite clear. Around the mid-second millennium BCE it would appear that the population had been completely integrated in the local milieu.

Objects of Scandinavian origin

Another chronological group of metal finds from northwestern Russia is represented by objects of Scandinavian provenance. This is represented by two flanged axes, an adze and a spearhead, all typical for the northern European culture of the Bronze Age.

The spearhead is cast in one, with the blade having a flame-like shape. It was found near the village of Peschanoye in the northwestern part of the coastal zone of Lake Ilmen (see Figure 7.1, map 2: 2; Figure 7.2, panel 2: 2). The total length of the spearhead is 11.6 cm, the length of the blade is 10 cm, the length of the socket (below the blade) is 1.6 cm, the diameter of the socket (external/internal) is 2.1/1.95 cm and maximum width of the blade is 3.2 cm. On the socket there is a hole 0.3 cm in diameter and the weight is 41.21 g. The chemical composition is Sn=10–13%, As<0.2%, Ni<0.5%, traces of Pb.

The spear belongs to the Hulterstad type based on Jakob-Friesen (1967). This type was widespread in the Late Bronze Age throughout northern Germany and Scandinavia. A long blade of flame-like or triangular shape is characteristic for the type, which appears from the end of period II and continues into early period IV (Jacob-Friesen 1967: 164, plates 80–91). Oscar Montelius considered this type as one of the leading forms of the third period of the Nordic chronology.

The flanged axe was found at the medieval town site of Gorodok on the Shelon River in the western Ilmen area (see Figure 7.1, map 2: 1; Figure 7.2, panel 2: 1). Its blade is arch-like, the head is straight and the surface is flat. The length of the axe is 9.85 cm, the blade is 4 cm wide and the butt is 2 cm wide. The chemical composition showed that copper is the basic component: Ni<0.4%, Sn=8–11%, Pb=1–2% (As, Sb and Ag unknown). The miniature axe found near the Shelon River is of the same type (Figure 7.1, map 2: 3; Figure 7.2, panel 2: 3). The length is 5.9 cm, the weight is 50.98 g., the blade is 3.3 cm wide, the butt is 1.5 cm wide and the flange is 0.3 cm high. The chemical composition showed that copper was the basic component: Sn=25–30%, Pb=1–2%, Sb<0.5%, As=1–2%,traces of Ni. According to the traditional typology these items belong to one of the variants of the north German type. In Denmark, similar objects are dated to 1600–1500 BCE (Vandkilde 1996: 107–17, 223, 306); in Poland they are dated to the first half or the middle of period II (c. 1500–1350 BCE; Szpunar 1987). The nearest finds of flanged axes come from Estonia (Lang 2007: 38) and Belorussia (see Figure 7.1, map 2: b; Kryval'tsevich 2006b: 48–49, figs 2: 4, 5).

A straight-bladed, symmetrical, chisel with an oval socket was found near Staraya Ladoga on the lower Volkhov River. The edge of the rim is strengthened with a low roll (see Figure 7.1, map 2: 4; Figure 7.2, panel 2: 4). The total length is 5.3 cm, the width of the blade is 1.2 cm, the diameter of the socket is 1.9 cm, the depth of the socket is 3.2 cm and the weight is 29.13 g. The chemical composition showed that the basic component was copper: As<0.2%, Ni<0.5%, Ag<0.4%, Sn = 5–6%, Sb<1%, traces of Pb. The chisel was found during excavations at Petrenko in the vicinity of Staraya Ladoga, and has numerous parallels from different parts of eastern Europe. The closest analogues are found in northern Europe and are dated to periods II–V according to Montelius; taking into account the small size of the example we may attribute it rather to period V (Baudou 1960: 26–7).

No bronzes of northern Scandinavian provenance have been found in the regions east of the area under consideration here (see Figure 7.1, map 2: a). The northwestern part of Russia can be considered the easternmost periphery of the distribution area of northern European type Bronze Age metal objects. The presence of artefacts of northern European provenance from the mid-second millennium to the early first millennium BCE in northwestern Russia attests to the existence of trade, intercultural and other links with northern Europe during the Bronze Age. These contacts were probably direct links via the Baltic Sea.

Objects of Mälar and Ananino types

The finds of metal objects from the Late Bronze Age and Early Iron Age are represented by Mälar and Ananino axes.

Mälar axes

These axes are of particular significance for elucidating the ties between the Volga-Kama region and Scandinavia during the Bronze Age, and they have a large distribution area embracing a considerable part of northern Europe from Scandinavia as far as the Volga and Kama rivers.

An axe of the Mälar type without a loop has been found in the village of Verkhny Prikhon on the Mshaga River (a tributary of the Shelon River) in the western Ilmen area (see Figure 7.3, map 1: 1; Figure 7.4: 1). The length of the axe is 8.6 cm, the blade is 3.7 cm wide and the diameter of the socket is 2.6 cm. The chemical composition of the axe shows that copper is the basic component: As<0.4%, Ni<0.5%, Ag~1%,

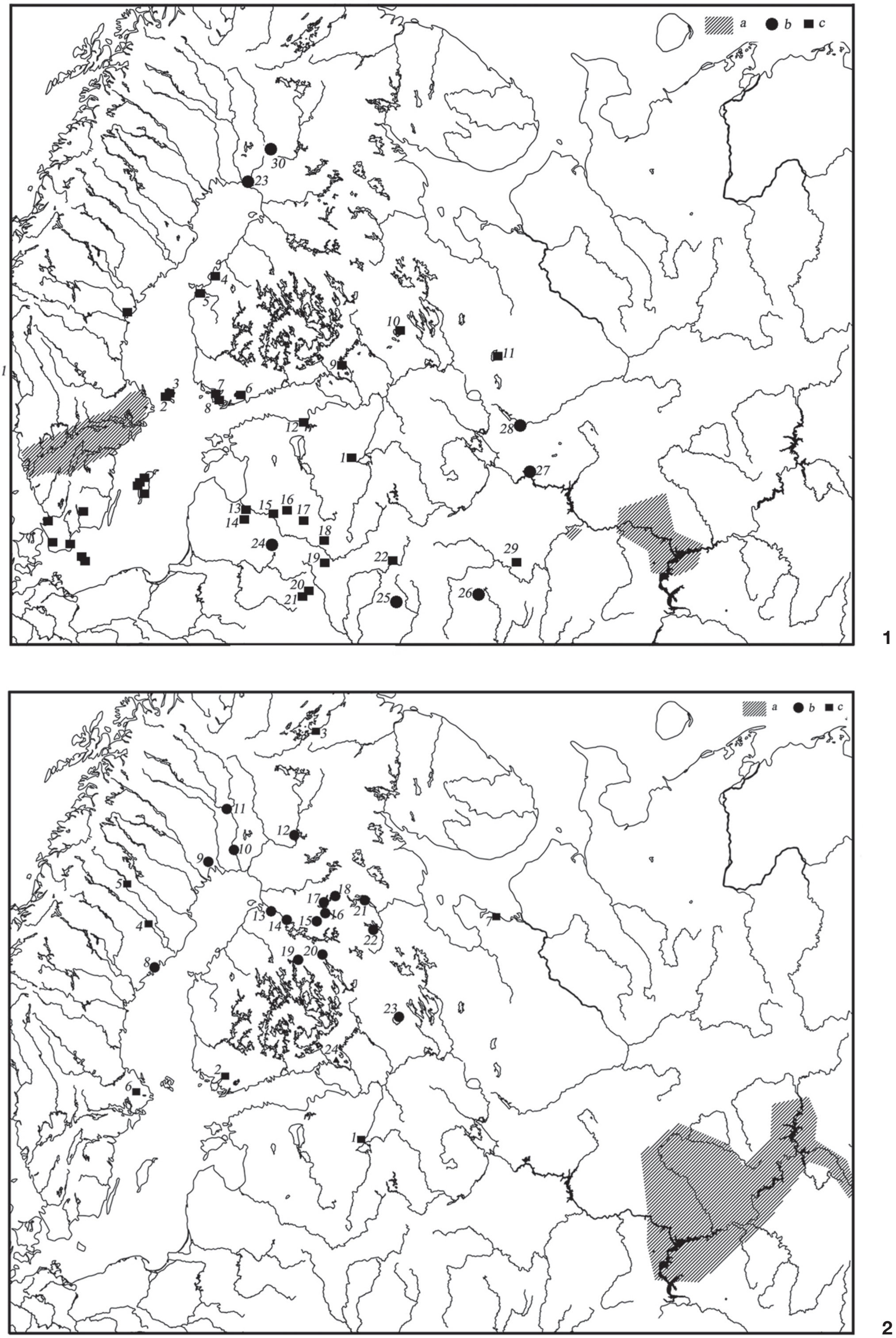
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Figure 7.3 Maps of distribution of Mälar (map 1) and Ananino (map 2) axes and moulds. For key, see opposite page.

Sb<1%, Pb=1–2%. The axe corresponds most closely to category KAM-4 according to Kuzminykh (1983: 82–5). Axes of this type are widespread in the central Volga region, Scandinavia, Finland, the Baltic and Belorussia. The axe from the Ilmen area has a trapezoid bevel consisting of three transversal straps and a roll hanging down from the ornamental belt. The rim above the ornamental belt is decorated with upright rolls. This axe is devoid of the loop that is common for objects of this type, and Kuzminykh (1983: 80) is of the opinion that all the Mälar axes without a loop are casting rejects.

Axes of the Mälar type are concentrated in two regions – the Volga-Kama and central Sweden (see Figure 7.3, map 1: a). According to Kuzminykh (1996: plate IV), a total of about 260 axes and one mould are known in the Volga-Kama region, and about 100 axes in central Sweden. In addition, 25 axes and 17 moulds come from the regions situated between these major areas of distribution including Karelia, Finland, the Baltic, Belorussia and central Russia (see Figure 7.3, map 1: b–c).

There is a discussion on the place of origin of axes of the Mälar type, and whether it originates in Sweden (as Tallgren and Meinander have suggested) or the Volga region (as suggested by Khalikov, Patrushev, Chernykh and Kuzminykh). Meinander, Kuzminykh, Patrushev and Kosmenko argue that Mälar axes spread with the Textile Ceramics. Kuzminykh points out that moulds for casting the axes have been found at sites connected to the Upper Oka and Dnieper-Dvina, Hatched Ceramics and Luukonsaari cultures (Kuzminykh 1993: 69).

Patrushev (1975), Khalikov (1977: 123–36) and Kuzminykh (1983: 80–90, 1993, 1996) have proposed various classifications of Mälar axes. They point out that the main region of the spread of the axes throughout the Volga-Kama region is its western part (i.e. the Volga). Kuzminykh (1993: 74) has compared the types of tools from southern Scandinavia and central Volga region, and concludes that the closest similarity is

Map 1 *a* – the distribution of axes of the Mälar type in the Volga-Kama region (after Kuzminykh 1983: fig. 92) and in Scandinavia (after Baudou 1960: map 10); *b* –moulds; *c* – Mälar axes. *1* – Verkhny Prikhon, Novgorod Oblast; *2* – Sund (Tallgren 1937: fig. 54); *3* – Saltvik (Meinander 1954: plate 9, b); *4* – Jeppo (Miettinen 1984: 19–22); *5* – Laihia (Tallgren 1937: fig. 52); *6* – Lohja (Tallgren 1937: fig. 54); *7* – Kimito (Tallgren 1937: fig. 54); *8* – Västanfjärd (Meinander 1954: plate 9, d); *9* – Kaukola Rokosina (Tallgren 1937: fig. 54); *10* – Kudoma 11 (Kosmenko 1996a: fig. 51: 1); *11* – Kinema (Foss 1952: fig. 100: 4); *12* – Vaivara (Lang 2007: fig. 73: 4); *13* – Klangukalns (Graudonis 1967: plate XX: 7); *14* – Vaškai (Antoniewicz 1955: tab. XXXV); *15* – Krustpils (Graudonis 1967: plate XXIV: 14); *16* – Lubāns (Okulicz 1976: fig. 36: 6); *17* – Ludza (Vankina 1960: 158; fig. 1, 8); *18* – Dudki (Charniauski 1999: 135–136); *19* – Charnitsa River (Zaikouski & Tsyrkunova 1996: 58); *20* – city of Borisov (Tallgren 1937: fig. 53); *21* – Minsk (Antoniewicz 1955: fig. 1–2); *22* – Nakvasina (Shmidt 1974: fig. 1: 2); *23* – Kemi (Meinander 1954: 27, fig. 10); *24* – Narkunai (Luchtanas 1981: 5–17); *25* – Zharyn (Shmidt 1974: fig. 1: 10–11); *26* – Satino settlement site (Izyumova 1967: fig. 3: 3); *27* – Vatazhka (Gurina 1963: fig. 57: 2); *28* – Veksa 1 (Nikitinskiy 1995: fig. 3: 12); *29* – Ryazan (Kuzminykh 1996: fig.10: 2); *30* – Rovaniemi (Bakka 1976: plate 13: 41). Numbers *11* and *14* without scale.

Map 2 *a* – The main distribution of axes of the Ananino type in the Volga-Kama region (after Kuzminykh 1983: fig. 9); *b* – moulds; *c* – Ananino axes. *1* – surroundings of Novgorod; *2* – Maaria (Tallgren 1937: fig. 38); *3* – Lusmasaari, Inari (Tallgren 1937: fig. 47); *4* – Lycksele (Hackman 1897: fig. 40); *5* – Sorsele (Tallgren 1937: fig. 27); *6* – Uppsala, Sweden (Tallgren 1937: fig. 25); *7* – Krasnaya Gora, Arkhangelsk Oblast (Foss 1952: fig. 70: 10); *8* – Hotingsjön, Bodum, Sweden; *9* – Sörbyn, Råneå (Tallgren 1937: fig. 26); *10* – Ylitornio (Hackman 1897, fig. 39); *11* – Tornedalen, Pajala, Sweden (Lundholm 1970); *12* – Neitilä 4, Kemijärvi (Meinander 1969: fig. 11B); *13* – Muhos (Hackman 1897: fig. 38); *14* – Vaala Säräisniemi Nimisjärvi (Tallgren 1914: figs 6–8); *15* – Hyrynsalmi (Meinander 1969: fig. 11A); *16* – Ämmänsaari Suomussalmi; *17* – Joenniemi Suomussalmi (Huurre 1982: fig. 3: 3); *18* – Juntusranta, Maikonsärkkä Suomussalmi (Huurre 1982: fig. 3: 2); *19* – Iisalmi (Meinander 1969: fig. 10B); *20* – Valtimo (Meinander 1969: fig. 10A); *21* – Elmenkoski, Karelia (Kosmenko 1996a: fig. 51: 2); *22* – Babya Gora, Ledmozero, Karelia (Bryusov 1940: fig. 1); *23* – Lahta II, Karelia (Kosmenko 1996a: fig. 63: 12); *24* – Räisälä Kalmistonmäki, Leningrad Oblast (Tallgren 1935: fig. 1). Numbers *4*, *6* and *22* without scale.

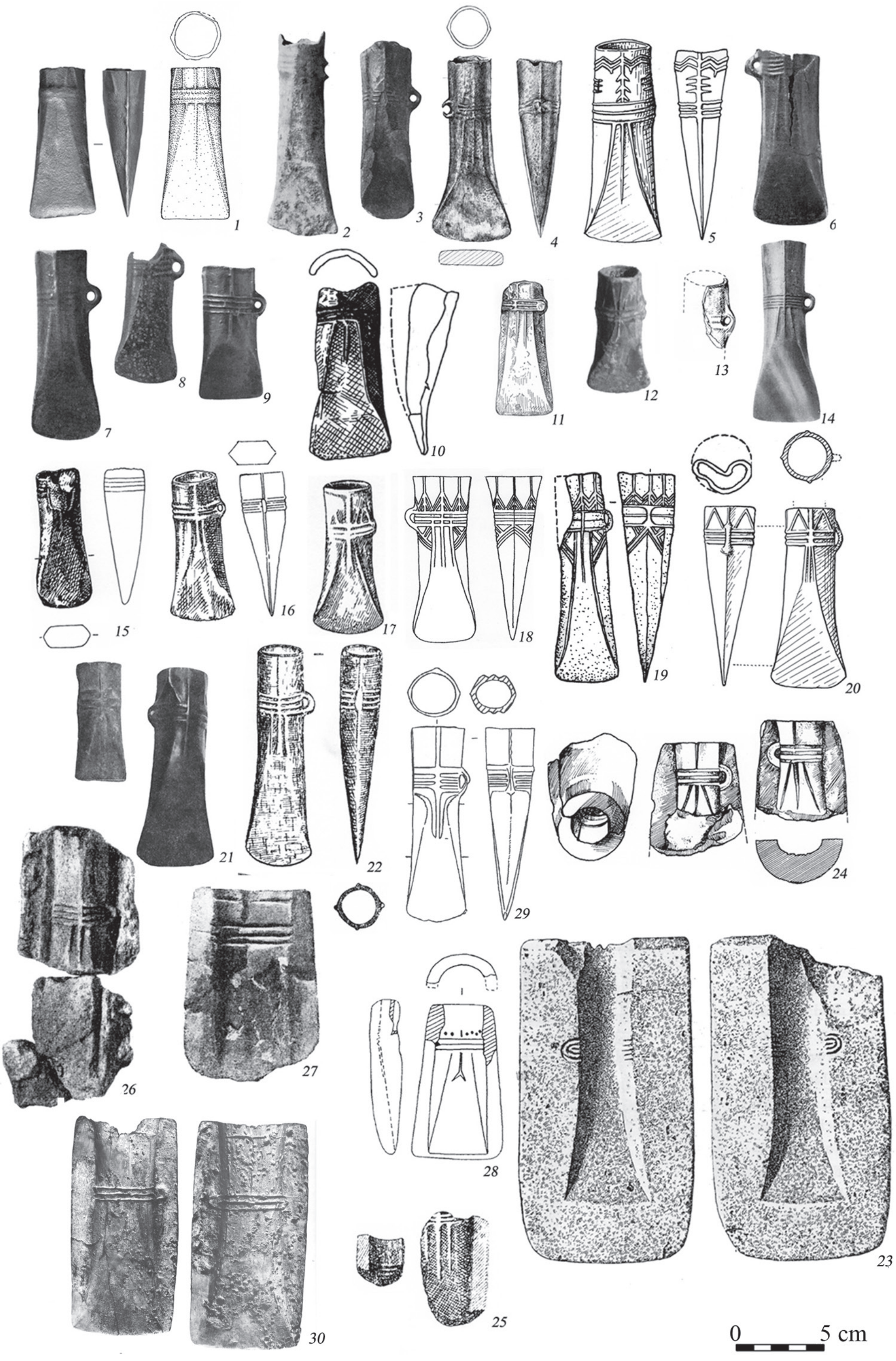
observed between the tools of the earliest stage, then the type developed separately in each region.

The finds of Mälar axes in Scandinavia have been considered in the works of Tallgren (1914, 1937: 30–41), Meinander (1954: 24–39) and Baudou (1960: 19–21, 174–5, plate IV). According to Evert Baudou's classification, the axes of the Mälar type are of two varieties: the Middle Swedish and the Norwegian types. The Middle Swedish type belongs to category KAM-4/22, according to the classification by Kuzminykh. According to Baudou's catalogue, ninety-two finds of Mälar axes of the Middle Swedish type are known in Fennoscandia; in addition there are eleven finds (plus one mould) of Mälar axes of the Norwegian type (Baudou 1960: 174–5, map 10).

Let us briefly consider the finds of Mälar axes and moulds (see Figure 7.4), as these have been found between the major distribution centres in Scandinavia and the Volga area (Kuzminykh 1993, 1996). These axes have been found at sites where Bronze Age textile ceramics and pottery of the Early Iron Age have been found as well; for instance, Kudoma 11 in Karelia (see Figure 7.3, map 1: 10; Figure 7.4: 10), Kaukola Rokosina on the Karelian Isthmus (see Figure 7.3, map 1: 9; Figure 7.4: 9) and Kinema in Arkhangelsk Oblast (see Figure 7.3, map 1: 11; Figure 7.4: 11; Kosmenko 1996a: 185–215; Foss 1952). In Finland, axes have been found in Sund, Saltvik, Jeppo, Laihia, Lohja, Kimito and Västanfjärd (see Figure 7.3, map 1: 2–8; Figure 7.4: 2–8; Tallgren 1937; Meinander 1954; Miettinen 1984). The find from Laihia is not of the Mälar type, according to Baudou (1960: 175). The axes from Kiukainen and Nakkila, the moulds from Suomussalmi and Vaala Säräisniemi Nimisjärvi in Finland, the axe from Valkjärvi Uusikulä Karvsaari on the Karelian Isthmus, and a mould from the settlement of Mayak on the Kola Peninsula (Gurina 1997: fig. 35: 1) are not considered Mälar types.

The southernmost finds of axes of the Mälar type are those from Vaivara in Estonia (see Figure 7.3, map 1: 12; Figure 7.4: 12; Lang & Laneman 2007), Klanģukalns, Krustpils, Lubāns and Ludza in Latvia (see Figure 7.3, map 1: 13, 15–17; Figure 7.4: 13, 15–17; Vankina 1960; Graudonis 1967; Okulicz 1976), Vaškai (Vašką) in Lithuania (see Figure 7.3, map 1: 14; Figure 7.4: 14; Antoniewicz 1955; Lukhtan 1982), Dudki in Belorussia and on the Charnitsa River in Vitebsk Oblast, near the city of Borisov, and Minsk in Minsk Oblast (see Figure 7.3, map 1: 18–21; Figure 7.4: 18–21; Zaikouski & Tsyrkunova 1996; Charniauski 1999). In Russia, such axes have been found at Nakvasino in Smolensk Oblast (see Figure 7.3, map 1: 22; Figure 7.4: 22; Shmidt 1974) and Ryazan (see Figure 7.3, map 1: 29; Figure 7.4: 29; Kuzminykh 1996: fig. 10: 2), and one axe has been found in the Staritsa region in Tver Oblast.

Moulds for Mälar axes have been found at sites of the Dnieper-Dvina culture, Upper-Oka culture and Hatched Pottery culture – these are finds from Narkunai in Lithuania (see Figure 7.3, map 1: 24; Figure 7.4: 24; Luchtanas 1981; Egoreychenko 2006), Zharyn in Smolensk Oblast (see Figure 7.3, map 1: 25; Figure 7.4: 25; Shmidt 1974), Vatazhka in Kostroma Oblast (see Figure 7.3, map 1: 27; Figure 7.4: 27; Gurina 1963) and the settlement of Veksa 1 in Vologda Oblast (see Figure 7.3, map 1: 28; Figure 7.4: 28; Nikitinskiy 1995). At the Satinskoye settlement site in Tula Oblast a clay model of an axe (see Figure 7.3, map 1: 26; Figure 7.4: 26; Izyumova 1967) has been found. Two moulds have been found in northern Finland – in Kemi (see Figure 7.3, map 1: 23; Figure 7.4: 23; Meinander 1954) and Rovaniemi (see Figure 7.3, map 1: 30; Figure 7.4: 30; Bakka 1976). It is noteworthy that moulds for Mälar axes have not been found in Scandinavia; one of the moulds comes from the Volga region (Kuzminykh 1983: plate 6).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25
30
0
5 cm

Figure 7.4 Mälar axes and moulds. The numbers correspond to those in Figure 7.3, map 1.

The axes and moulds described above are generally classified as type KAM-4 according to Kuzminykh. The axe from Sund, Finland, is only partially preserved, but it might belong to the KAM-2 category. Kuzminykh (1993: 74) points out that the mould from Kemi belongs to this category. The finds from Belorussia (except for the axe from Minsk) are unusual as they have an additional ornamental zone between the loop and the rim of the socket, as well as below the transversal ornamental belt and the loop. In this sense they resemble the axe from Laihia in Finland.

The western part of the distribution area for axes and moulds of the Mälar type coincides with the region of the north European Bronze Age culture; the axes have been found in the basin of the western Dvina, the Baltics and Belorussia, which were influenced by Scandinavian Bronze Age groups. In terms of history and geography it is logical to suppose that the axes spread into the basin of the western Dvina from central Sweden via the Baltic Sea rather than from the Volga-Kama region. Mälar axes and Ananino axes from the Volga are considered as contemporary, therefore the problems of the chronology of Mälar axes will be considered below together with the chronology of Ananino finds.

Ananino axes

One axe of this type was recently found in the vicinity of Novgorod (see Figure 7.3, map 2: 1; Figure 7.5: 1). This is an undecorated axe with an oval cross-section and trapezoid bevel. The length is 4.3 cm, the width of the blade is 3.4 cm, the diameter of the socket is 1.6–3.3 cm and the depth of the socket is 3.1 cm. The axe is attributed to category KAN-26 according to Kuzminykh's typology (1983: 62)[3]. The chemical composition showed that copper was the basic component: As<0.2%, Ni<0.4%, Ag<0.4%, Sn=2–3%, Sb<0.8%, Pb<0.6%. The weight is 48.66 g.

In Finland two Ananino axes (see Figure 7.5) have been found. One axe, found in the Maaria district near the city of Turku (see Figure 7.3, map 2: 2; Figure 7.5: 2; Tallgren 1933, 1937: fig. 38; Meinander 1954: plate 11ff.) has been connected to Kuzminykh's (1983: 64–5) category KAN-48, which encompasses axes with a trapezoid bevel. The other axe was found in a hoard from Lusmasaari Island in Lake Inari, Lapland (see Figure 7.3, map 2: 3; Figure 7.5: 3; Tallgren 1937: fig. 47; Meinander 1954: plate 17) and attributed by Kuzminykh (1983: 69) to category KAN-64, which consists of axes with a hexagonal socket and rectangular bevel. This axe was first classified as a Seyma-Turbino artefact by Meinander (Meinander 1954: 41; Lavento 2001: 122). Manyukhin (2002: 166) notes two Ananino axes from Porvoo (Borgå), Finland (Meinander 1954: plate 11d, e), but they should rather be seen as local types.

Four Ananino axes have been discovered in Sweden – two in Västerbotten County in Lycksele Municipality (see Figure 7.3, map 2: 4; Figure 7.5: 4; Hackman 1897: fig. 40; Tallgren 1937: fig. 24) and one in Sorsele (see Figure 7.3, map 2: 5; Figure 7.5: 5; Tallgren 1937: fig. 27). Kuzminykh (1983: 65) placed them in the category of axes with an oval socket and trapezoid bevel (KAN-48). In addition, one axe has been found in Uppsala (see Figure 7.3, map 2: 6; Figure 7.5: 6; Tallgren 1937: fig. 25).

Zhul'nikov (2008: 34) points out that on the western White Sea coast and in the southern part of the White Sea basin six axes of the Ananino type have been discovered.

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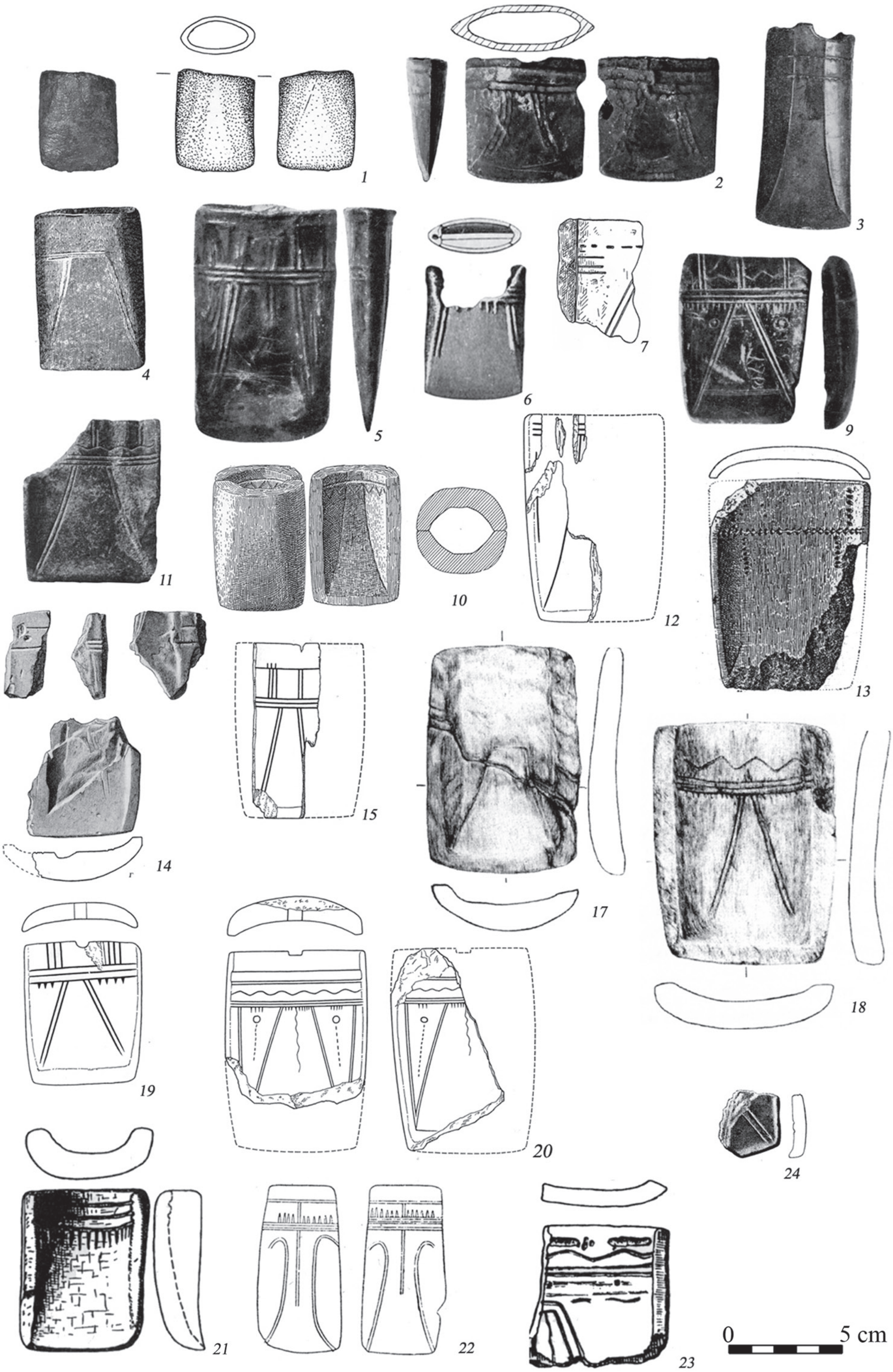
[3] Here and below, Sergey V. Kuzminykh's typology (1983) is used.


1
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14
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17
18
19
20
24
21
22
23
0
5 cm

Figure 7.5 Ananino axes and moulds. The numbers correspond to those in Figure 7.3, map 2.

One of the examples was found at Krasnaya Gora (see Figure 7.3, map 2: 7; Figure 7.5: 7; Foss 1952: fig. 2: 16, fig. 70: 10). The axe was not completely preserved, but the edge of the ornamental belt and trapezoid bevel were discernible. These features resemble objects classified as KAN-28. On the Pinega River in the same region, two of the seven known ceremonious Ananino pole-axes, with a representation of the head of a bird of prey at the socket and with an elongated butt in the form of a wolf's head, have been discovered (Tallgren 1937: figs 1–2; Bryusov 1940: 126–7; Kuzminykh 1983: 143–5).

In northern Fennoscandia, moulds for Ananino axes, or imitations of such axes, have been found. In Sweden, a mould has been found in Tornedalen, Pajala, Norbotten County (see Figure 7.3, map 2: 11; Figure 7.5: 11; Lundholm 1970). The decoration of the axes cast in that mould is similar to the ornamentation of KAN-38 type axes according to Kuzminykh (1983: 64, plate VII). The ornamentation on the mould is singular – the ornamental belt is decorated with a "fringe", and between the ornamental belt and the rim there is a wavy line and three doubled upright bands. One mould comes from Sörbyn, Råneå, Norbotten County (see Figure 7.3, map 2: 9; Figure 7.5: 9; Tallgren 1937: fig. 26). Kuzminykh (1983: 65) supposes this form is a parallel to KAN-48, but it is similar to the mould described above as it is decorated with a "fringe" beneath the ornamental belt and doubled upright bands. Furthermore, there are two imprints of a circular pattern and the lines of the bevel are united in their lower and upper parts by doubled transversal lines such as on some KAN-28 axes (Kuzminykh 1983: plate VI: 14, 15). The mould from Hotingsjön, Bodum, Västernorrland (see Figure 7.3, map 2: 8; Figure 7.5: 8; Meinander 1969: 53; www.historiska.se/data/?bild=307697) belongs to the widely distributed KAN-28 type. Moulds have also been found at Stugum, Jämtland (Meinander 1969: 53) and Sanduden, Arjeploug, Lapland (Bakka 1976: 13; Manyukhin 2002: 169). A fragment of a mould from Varangerfjord in Norway (Solberg 1909: fig. 180) cannot be reliably identified as a mould for an Ananino axe because of its small size, although it cannot be ruled out (Tallgren 1937: 14; Manyukhin 2002: 170).

In Finland, moulds for Ananino axes are fairly numerous, with a concentration in the north. According to the data of Meinander and Huurre, many of the objects have been found at settlements where ceramics of the Sär 2 type (Luukonsaari, etc.) have been discovered. A mould from Ylitornio, Lapland (see Figure 7.3, map 2: 10; Figure 7.5: 10; Hackman 1897: fig. 39; Tallgren 1937: fig. 33) has a socket with a hexagonal cross-section, and in terms of its decoration is close to category KAN-74, according to Kuzminykh's typology (1983: 70, plate XIV). The mould found at Muhos on the middle reaches of the Oulujoki River is for an axe that resembles Ananino axes (see Figure 7.3, map 2: 13; Figure 7.5: 13; Hackman 1897: fig. 38; Tallgren 1937: fig. 39). The decoration is rendered in a technique that differs from that of the Ananino objects – the lines on the mould are shaped as incisions rather than as continuous grooves. The mould from Juntusranta, Maikonsärkkä, Suomussalmi is for a KAN-38-type axe (see Figure 7.3, map 2: 18; Figure 7.5: 18; Huurre 1982: fig. 1: 8, fig. 3: 2; Huurre 1984: map 1: 7). The mould from Joenniemi Suomussalmi (see Figure 7.3, map 2: 17; Figure 7.5: 17; Huurre 1982: fig. 1: 10, fig. 3: 3) is undecorated and has an arch-like bevel. This combination of features is similar to KAN-52 axes according to Kuzminykh's typology, and the mould could possibly be a blank for manufacturing axes of KAN-54, 56 type. The axe cast in the mould from Ämmänsaari Suomussalmi (see Figure 7.3, map 2: 16; Figure 7.5: 16; Huurre 1982: fig. 1: 17, fig. 3: 4) must have resembled objects of KAN-28 type, but the lines forming the bevel cross the ornamental belt, ending near the rim of the socket. The mould from Valtimo (see Figure 7.3, map 2: 20; Figure 7.5: 20; Meinander 1969: fig. 10A) has a trapezoid bevel and an ornamental belt like that of KAN-48-type axes, and an undulating line above the belt similar to KAN-38. The ornamentation is reminiscent of the mould from Sörbyn, Råneå, Sweden. The mould from Iisalmi (see Figure 7.3, map 2: 19; Figure 7.5: 19; Meinander 1969: fig. 10B) may be attributed to category KAN-28. Only half of the mould from Hyrynsalmi (see Figure 7.3, map 2: 15; Figure 7.5: 15; Meinander 1969: fig. 11A; Huurre 1984: map 1: 5) has been preserved, but it has features of both type KAN-42 and type KAN-44, according to the typology of Kuzminykh. A mould from Neitilä 4, Kemijärvi (see Figure 7.3, map 2: 12; Figure 7.5: 12; Meinander 1969: fig. 11B) is fragmented and only the edge of the ornamental belt and trapezoid bevel have been preserved. These features are similar to KAN-28 objects. In Ämmänsaari, Jalonniemi Suomussalmi, a core which possibly was used for casting axes of the Ananino type has been found (see Figure 7.3, map 2: 16; Figure 7.5: 16; Huurre 1982: 24, fig. 1: 16; Manyukhin 2002: 169). At Vaala, Säräisniemi, Nimisjärvi (see Figure 7.3, map 2: 14; Figure 7.5: 14; Tallgren 1914: 13–14, figs 6–8; Meinander 1954: figs 30–33; Huurre 1984: map 1: 1), one of the moulds is made of clay with a texture that resembles the clay used for Säräisniemi 2 pottery (Lavento 2001: 125). In addition, Huurre (1984: map 1; 3) notes the finds of moulds for Ananino axes (see Figure 7.5) in Suomussalmi Tormua (Huurre 1984: map 1: 8).

On the Karelian Isthmus, in Räisälä Kalmistonmäki (Melnikovo), a fragment of a mould for an Ananino axe has been found (see Figure 7.3, map 2: 24; Figure 7.5: 24; Tallgren 1935: fig. 1; Tallgren 1937: fig. 37; Meinander 1954: plate 30, j; Uino 1997: fig. 4.2: 8). In Karelia, three moulds for casting Ananino axes have been found. An axe mould (Kosmenko 1996a: 209) with features of both Finnish and Ananino axes has been found at Elmenkoski in northern Karelia (see Figure 7.3, map 2: 21; Figure 7.5: 21), where textile ceramics and pottery of the Arctic type have been discovered as well. This mould may be attributed to the group of axes with an oval socket without any distinct bevel (type KAN-4), decorated with an ornamental belt. There is a “fringe” beneath the ornamental belt. Another mould was found at Lahta II, situated on Lake Syamozero on the western Onega (see Figure 7.3, map 2: 23; Figure 7.5: 23). At the site, textile ceramics and Luukonsaari ware have also been found (Kosmenko 1996b: fig. 53). The mould was only partly preserved, but the preserved part suggests that the bevel was of a complicated configuration similar to KAN-24 axes. Bryusov (1940: 207, fig. 1) notes two halves of an axe mould from Babya Guba on Lake Ledmozero (see Figure 7.3, map 2: 22; Figure 7.5: 22; Bryusov 1940: 207). The shape of the bevel conforms to artefacts of the KAN-24 category. The design is somewhat complicated as there is a “fringe” between the ornamental belt and the rim of the socket, and an upright line running from the belt to the bevel.

A total of thirteen Ananino axes have been found. Six examples have been found west of the distribution area of the Ananino culture, one in the region of the western and southern parts of the White Sea basin, one in the Lake Ilmen region and five axes in Finland and Sweden. Four moulds were found in Karelia (and the Karelian Isthmus), twelve in Finland, five in Sweden; in total, twenty-one moulds, which exceeds the number of moulds known from the area of the Ananino culture itself (Kuzminykh 1983: table I).

Axes from Sweden and Finland may be subdivided into two groups – those with oval (four axes) and hexagonal (one axe) sockets. Axes with an oval socket belong to the

KAN-48 category. Within the basic area of the Ananino culture only four axes of this type are known, but taking into account the close similarity of this category to the fairly representative KAN-28 variety, which includes at least ninety-one axes, we may state that this form is characteristic of the Ananino culture. The axe from Ilmen belongs to the KAN-26 category which includes twenty-three items from the area of the Ananino culture.

Moulds for axes of the Ananino type from northern Fennoscandia may be subdivided into: (i) KAN-28, -38, -42/44 and -54/56 types; (ii) objects closely resembling KAN-4, -24, -28, -38 and -48 types, but which have the additional decoration with upright bands connecting the rim and the ornamental belt as well as the “fringe” and certain other elements; and (iii) a local form having no direct parallels among the Ananino objects, such as the find from Muhos, northern Finland.

The chronology of Mälar and Ananino axes

The chronology of axes from the Volga-Kama region is based on the dates of the accompanying grave goods from burials. According to Kuzminykh’s chronology, the types of axes considered above are dated predominantly to the eighth to sixth centuries BCE. However, the early phase of the development of the Ananino culture has been pushed back in time, as earlier dates have been proposed for the early nomadic cultures, and consequently the imports which are the basis for dating Ananino cemeteries. Korenyuk (2000) has distinguished three phases of the development of the Ananino culture. According to this chronology, the Mälar axes found on the Volga may be dated to the late tenth to late seventh century BCE, because they were found together with spearheads and arrowheads, which, according to Korenyuk, belong to the first and second stages of the Ananino culture. This fact does not contradict Kuzminykh’s view that axes of the Mälar type appeared on the Volga in the early first millennium BCE (Kuzminykh 1993: 70). In Scandinavia, these axes are stray finds dated on the basis of their typological features to periods IV–VI (i.e. to the first half of the first millennium BCE, including periods IV–V; Baudou 1960: 20).

Ananino axes with a socket of oval cross-section are also dated to the late tenth to the turn of the seventh to sixth century BCE by Korenyuk. The axe from Inari and the mould from Ylitornio (northern Finland) with a socket of hexagonal cross-section are dated to the sixth century BCE by Kuzminykh, while the date corresponding to Korenyuk’s chronology is the eighth to sixth century BCE.

Examining a map of distribution of axes and moulds of the Mälar and Ananino types, it can be observed that the Mälar artefacts tend to be concentrated further to the south than the Ananino axes, although there are large regions where both types are found. This includes the eastern coastal region of central Sweden, coastal Finland, Karelian Isthmus and Lake Ilmen.

Conclusion

I have reviewed the Bronze Age metal objects and moulds from the second and first half of the first millennium BCE in the region of northwestern Russia. The Bronze Age begins here with the spread of artefacts of the Seyma-Turbino type. Radiocarbon dates indicate that this process took place in the twentieth to seventeenth centuries BCE. It seems that the Seyma-Turbino metal production has left no deep traces in northwestern Russia, representing just a brief episode. At the same time, sites with evidence of metallurgy connected to the Textile Ceramics culture begin to appear. Subsequently, artefacts of northern European provenance appear, generally dated to 1600–700 BCE, spreading eastwards as far as the Volkhov River. Further to the east no such artefacts have been found. Although the number of these northern European artefacts is low, their very presence is all the more important, and suggests that northwestern Russia was part of the zone of influence of northern European Bronze Age cultures.

At the end of the Bronze Age and beginning of the Early Iron Age the situation changed considerably in northwestern Russia. The number of metal objects and moulds increases. They are represented mainly by two varieties of axes – Mälar and Ananino axes. The areas of their distribution coincide or partially overlap mainly in the Volga-Kama region. The Ananino axes are mainly distributed in the northernmost regions (Karelia, Finland, northern Sweden), while the Mälar axes are found further to the south. Moreover, cultural differences appear to be connected to these finds. Both in terms of geography and chronology, the Ananino axes are linked with the Luukonsaari culture and other variants of the Sär 2 group, whereas the Mälar axes are related to the Hatched Ceramics, Dnieper-Dvina and Upper Oka cultures, and with the Textile Ceramics culture towards the end of the Bronze Age. The objects differ sharply in terms of typology as well. All these facts taken together seem to suggest the different provenances of Ananino and Mälar axes. The Ananino examples should be related to the Volga-Kama region, while the Mälar axes should be connected with the influence of northern European manufacturing centres.

Thus, we can conclude that finds related to metal production are found throughout the Bronze Age in northwestern Russia, with no chronological gaps. These finds suggest both domestic production and foreign influence. There were two main sources of those impulses: the Volga-Kama centre and Scandinavia.

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8

Local centres in the periphery: the Late Neolithic, Bronze Age and Early Metal Age in Finland

Mika Lavento

The hypothesis: active periphery with peripheral centres

The purpose of this chapter is to indicate diversity in an area which in a large-scale perspective is usually placed at the margins of the Scandinavian Bronze Age. My hypothesis is, however, that the current territory of Finland and the Karelian Isthmus were not a homogeneous far-away periphery.

I will compare a few key phenomena on the coast and inland in Finland. Northern Lapland will not be included here because the region differs considerably from the southern part of the Nordic Bronze Age. Comparison between south and north Lapland would naturally be extremely interesting; in this chapter, however, these regions have been left for future discussions.

My first statement is that the end of Neolithic in the coastal and inland regions of the research area is problematic to date because of different phenomena that indicate a cultural change. The earliest cultivation is traceable in the Late Neolithic around 2300 BCE at the coast and 2200 BCE inland. Accordingly, although the spread of bronze axes began almost synchronously from two directions – southwest and east – it still seems clear that the earliest metal finds are known in the inland, not near the coast (Meinander 1954b; Lavento 2001). The possible reasons for this will be discussed later.

Second, on the basis of finds or bronze working, two local Bronze Age centres are traditionally distinguished. Figure 8.1 shows the coastal zone of southwest Finland; the large area in the east and north represents inland.

Southwest Finland had contacts with southern Scandinavia and the cross-sea contacts made it a centre in the Bronze Age. Why these two areas – which are very different in their characters – have been distinguished is due to research-historical reasons, distinctive find concentrations and the evident cultural connections in opposite directions. The southwestern zone had connections with southern Scandinavia while the inland had contact routes to the Middle Volga region and northern Scandinavia (see Figure 8.2).

The inland is more complicated as it has several local concentrations. One of these is Sarsa in Kangasala in southern Finland; the area is evidently a periphery (see

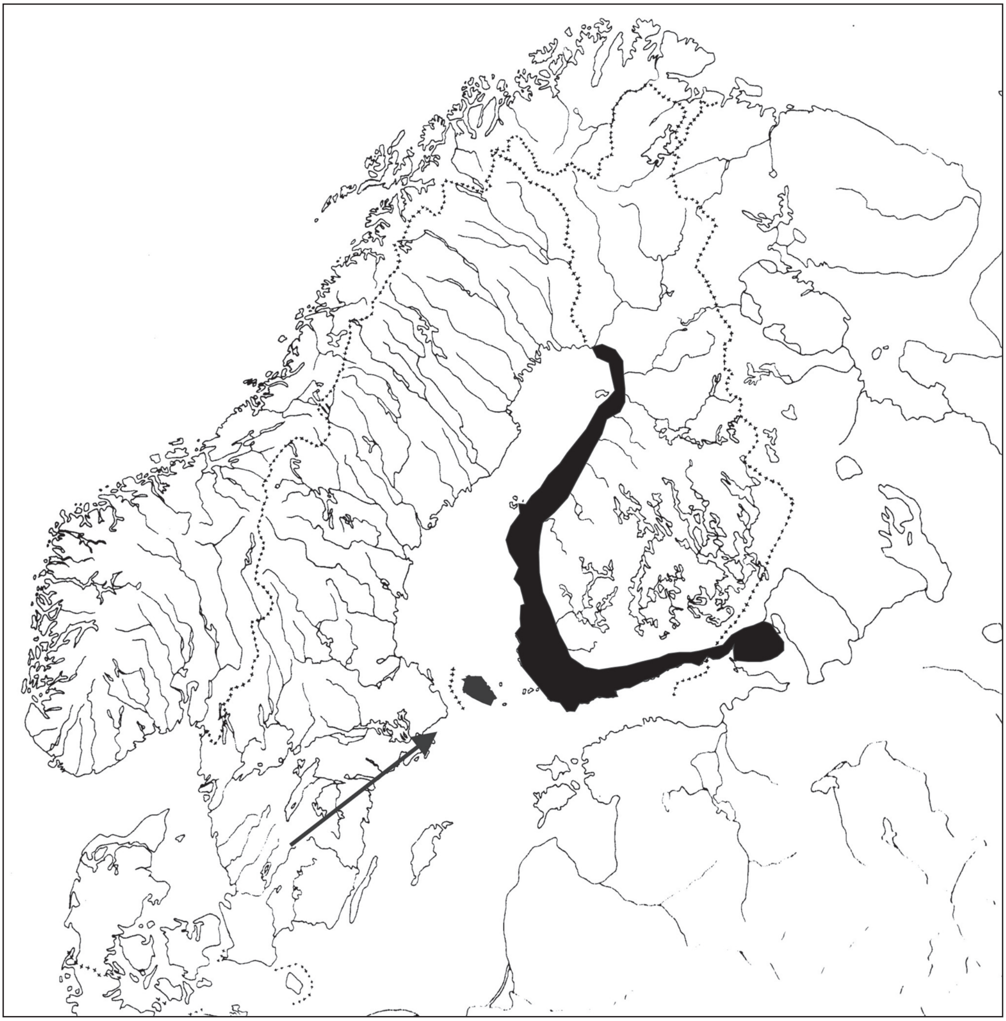

Figure 8.1 The western Bronze Age on the coast of Finland. The eastern Early Metal Age culture prevailed in the east, Lapland excluded. The arrow suggests the direction of the influence coming from southern Scandinavia to Finland.

Figure 8.6). However, it may have belonged to the network route between southern Finland and Estonia. This may have taken place already during the late Neolithic but is indicated by Bronze Age ceramics in the inland. The coastal zone and inland is the most important distinction in archaeology in Finland. First metals were imported from west and east, but since the beginning of the first millennium BCE bronze axes were produced locally. The key characteristic of the western Bronze Age is the cairn.

My third statement is the most complicated. Archaeological material indicates that the map of Bronze Age and Early Metal Age settlement can be outlined also on the basis of more than two centres in Finland. In this chapter, I review the evidence of four other possible centres of local importance. The reasons for distinguishing them are based on site and find concentrations, in particular ceramics. The problem will be

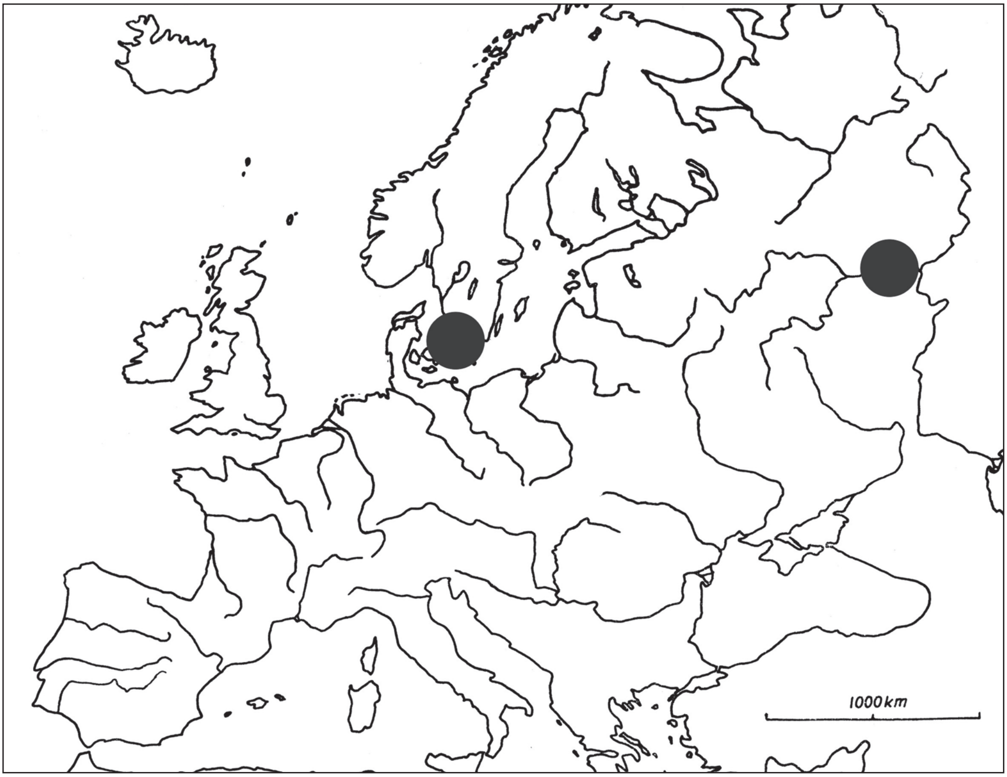

Figure 8.2 The large centres in southern Scandinavia and the Volga region.

elucidated below. The main emphasis of this chapter is the inland and for this reason inland centres have been distinguished. In the coastal zone, it might be possible to distinguish more local centres, but because the coastal area is large and without clear, dense concentrations I do not discuss this problem much here. The inland centres are not of the same size or type, but they differ from each other considerably. This is explained by research-historical reasons, research activity and the location of the sites in suitable places in relation to water courses. Almost all of the sites which belong to the centres, as well as their finds, are presented in detail in this chapter (Lavento 2001).

Geographic overview

A centre is a concept that cannot be given a straightforward definition. It can be understood as a large area or it can be one single place. In all cases, a centre is characterized by the condensation of cultural phenomena and it must be defined in opposition to its own surrounding areas. In this chapter, a local centre is a concept that has a distinct empirical background. It is a concentration of sites dating to the Bronze Age, and it can be separated from the surroundings on the basis of finds and structures at the sites.

In the Bronze Age, access to metal allowed some areas and places to grow in importance compared with areas lacking the valuable raw materials. Southern Scandinavia developed as a centre and copper artefacts were exported to other areas. At the same time, a large amount of metal was brought to Scandinavia. Nevertheless, in the mountain regions of Scandinavia some metal sources might already have been available to Bronze Age groups (Melheim 2009). Likewise, there was a centre with local copper sources in the Middle Volga region (Chernykh & Kuzminykh 1989). Soon copper and copper artefacts spread in the large area over the coniferous zone from the Atlantic to Siberia.

Both southern Scandinavia and the Middle Volga region had been dynamic central areas already in the Middle Neolithic, as indicated by the archaeological material, which is abundant and which spread from the key area of the culture to the surrounding areas. This is visible, too, in both subsistence strategies and social hierarchies. On this basis the introduction of metallurgy was a relatively short-term process. Scandinavian, Late Pozdnyakovo and Seima-Turbino populations can usually be defined on the basis of their characteristic metals, although other features in the material and sites may partly define them. The Seima-Turbino phase differs from many other phases in prehistory because there are no local pottery types and the metal implements define the phases.

The current Finnish and Karelian territories (the Karelian Isthmus and Karelian Republic) are located between these two large-scale centres. The archaeological material allows us to trace influence from both directions. In order to get an overview of the development, all types of empirical evidence like sites, ceramic groups, palaeobotanical data and so on have to be included in the review.

Dichotomy between coast and inland in prehistoric Finland

The traditional hypothesis in Finnish archaeology has been that the coastal zone was a culture area of its own as opposed to the inland (Hackman 1897; Tallgren 1931; Edgren 1992). These two zones have been considered as separate since the emergence of the Battle Axe population around 3200 BCE. The dichotomy prevails during the Late Neolithic and Bronze Age, although a considerable number of variations are implied. The division is reflected in terminology, too. On the coast, the Finnish scholars speak about the Bronze Age, but in the inland, the appearance of early bronze axes together with the new ceramic types is considered as the basis for the Early Metal Age (see Figure 8.3).

Several scholars have noted that significant impulses came from Scandinavia and Estonia (Tallgren 1931; Kivikoski 1961; Carpelan 1979; Salo 1981) before the beginning of the Bronze Age. The preceding impulses had a considerable influence on the development of the Bronze Age in southern Finland. One traditionally accepted Bronze Age central area is a zone that expands from the coastal zone of southern Satakunta to southwest Uusimaa (Salo *et al.* 1992; Okkonen 2003). In terms of agriculture and maritime contacts, the southwest coast has favourable soils and climatic conditions. Further in the north there were some favourable Late Neolithic areas, too (for example, the estuaries of the great rivers Kemijoki, Iijoki, Oulujoki, etc.). The emphasis should be placed on the inland watersheds and rivers.

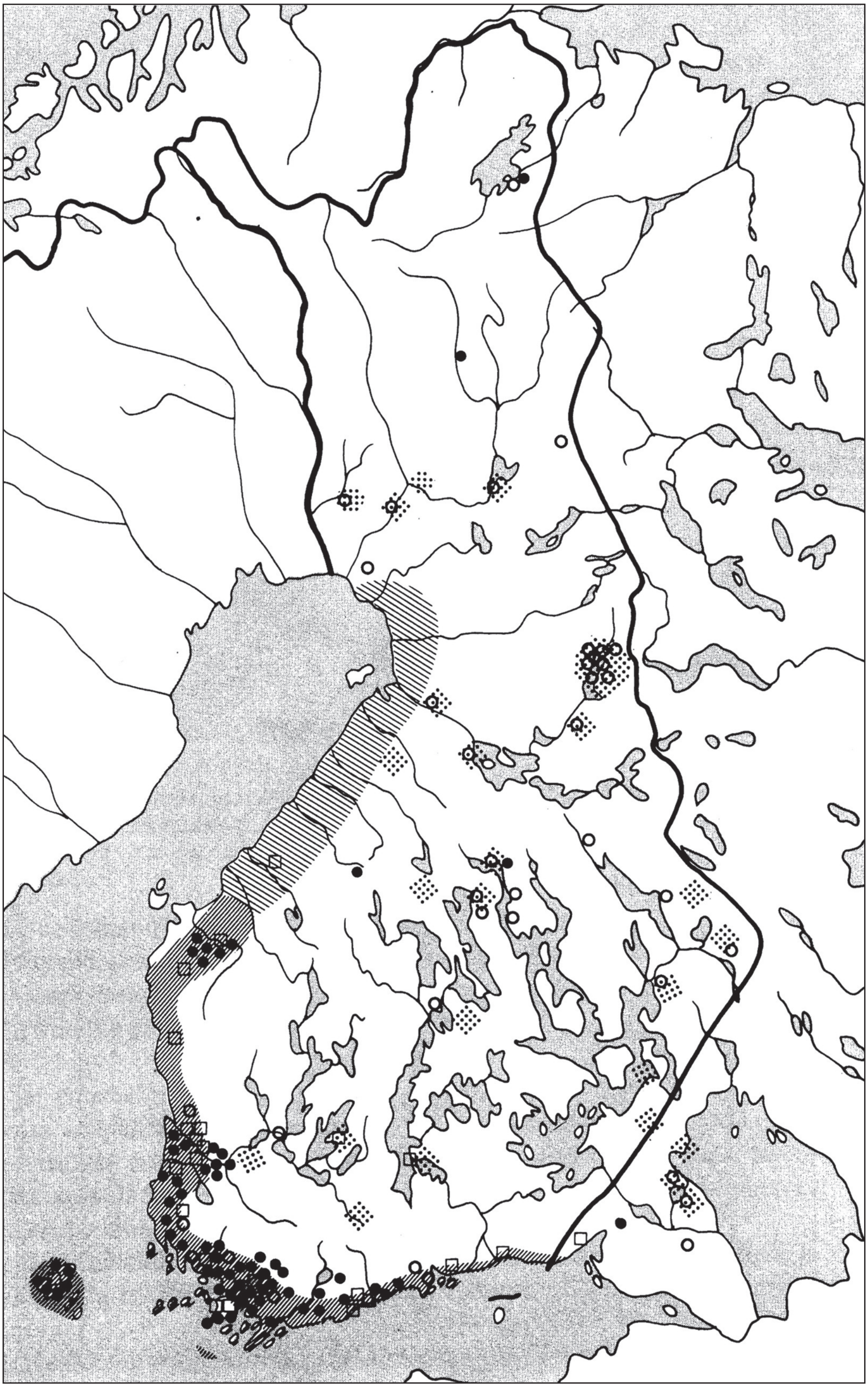

Figure 8.3 The Bronze Age culture on the coast, with concentrations of cairns (black dots), according to Huurre (1979: 97).

The inland differs considerably from the coastal zone. In the Neolithic, there were some large concentrations of settlement sites in the Häme and Satakunta region, in the Saimaa region and on the Karelian Isthmus. Traditionally, it has been suggested that for climatic reasons there are many areas that were not favourable for permanent cultivation in prehistory, although some areas did have good agricultural conditions. Interconnections are also more complicated than in the Baltic Sea area. It would be easy to suppose that this area remained a periphery while considerable changes took place on the coast.

Regardless of the clear differences in climate, pollen analyses support the large spread of early agriculture at the turn of the third and second millennia BCE (Vuorela 1999). If Lapland is excluded, we can say that this process influenced all parts of the country.

Overview of the chronological phases of the settlement history

Battle Axe culture, Kiukainen culture and textile impressions on other ceramic types

A. Äyräpää (1922) and C. F. Meinander (1954a) defined the Kiukainen culture as a fusion of Late Comb Ware and Battle Axe populations (i.e. as a connection between indigenous inland populations and newcomers). On the coast, this was the last Late Neolithic period preceding the beginning of the Bronze Age.

For the first time, Corded Ware vessels were decorated with small, almost invisible textile impressions which first appeared in the Baltic countries. The ceramics with the textile impressions spread both to the east and north (see Figure 8.4). It has been suggested that the Corded Ware culture played a role in the development of Textile Ceramics (Edgren 1970: 33; Carpelan 1979: 14–15). This is worth mentioning because textile impressions are visible on the surface of Kiukainen pottery (Äyräpää 1922: 135; Meinander 1954a: 152–3). It is probable that the Kiukainen vessels developed as a result of the connections of local Corded Ware, Late Comb Ware, Estonian Textile Pottery and east Swedish Late Neolithic ceramics and were used between 2400–1700 BCE (Carpelan 1999: 273).

The Late Neolithic implied a large number of changes in economy related to the appearance of metal. During the Battle Axe phase there were frequent contacts from Estonia to the coast of present-day Finland (Äyräpää 1933; Edgren 1970; Lang 1998). Other directions of communication are Sweden and Denmark (Malmer 1962, 1975; Kristiansen 1987).

Pollen evidence indicates that cultivation started in the coastal region after roughly 2300–2200 BCE (Alenius 2007). Animal husbandry was introduced with the Battle Axe culture in the coastal zone. In the inland, indications of early animal husbandry are rare (e.g. Räty 1995) and the contexts have remained unclear.

The synchronous pottery in Satakunta and in the lake district of southern Häme (Tavastland) is "mellanzonskeramik" (i.e. so-called "Middle-Zone ceramics", dated to 2400–1700 BCE; Carpelan 1979: 14–15, 1999: 273; see Figure 8.5). Carpelan emphasized connections to the Baltic countries and he supposed that Scandinavian influence was missing in this pottery. In my opinion, the definition is inadequate and the settlement

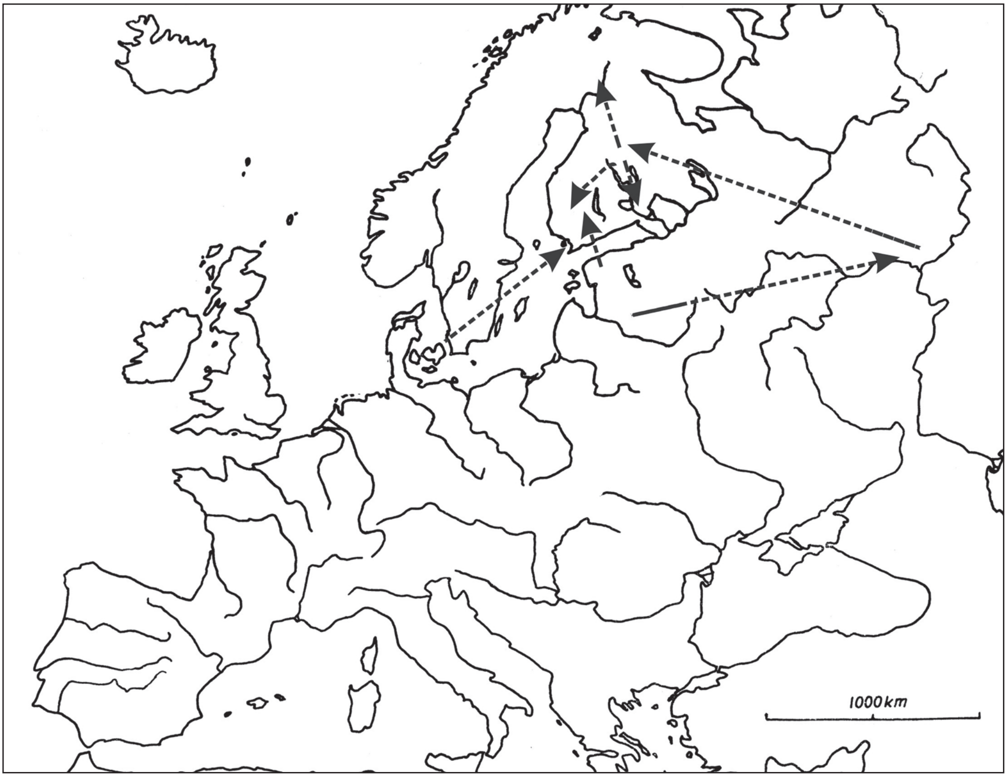

Figure 8.4 Main directions of influences in Finland in the Late Neolithic, Bronze Age and Early Metal Age.

history of the Late Corded Ware in the inland is disputable (e.g. Edgren 1999: 290). However, the pottery indicates both the transition from the Neolithic to the Early Metal Age and the fusion of the coastal and inland populations.

In the lake district of Finland the Late Neolithic Asbestos Ware (i.e. the Pöljä type and the somewhat enigmatic Jysmä type) date to 4000–1800 BCE (Meinander 1954b: 162–7; Edgren 1964: 25–6; Lavento & Hornytzkyj 1996: 45). Some sherds with textile-impressions are known.

Transition from the Late Neolithic to the Bronze Age/Early Metal Age

On the coast, the end of the Neolithic is interpreted by Unto Salo (2004) as a gradual transition, where the Kiukainen populations continued living alongside the Scandinavian newcomers. The proper Bronze Age culture with houses of Scandinavian types, permanent agriculture, and use of various metal objects developed as a result of the coexistence and finally a fusion of these populations. This took place during period II of the Scandinavian Bronze Age (ca. 1500/1400 BCE), with the first flanged axes (Salo 2001; 2004: 140–141). Salos's main arguments are cairns, large rectangular houses of the "Scandinavian" type and Germanic loan words (Salo 2008). The culture differed considerably from southern Scandinavia (Tallgren 1931; Salo 1981; Asplund 2008).

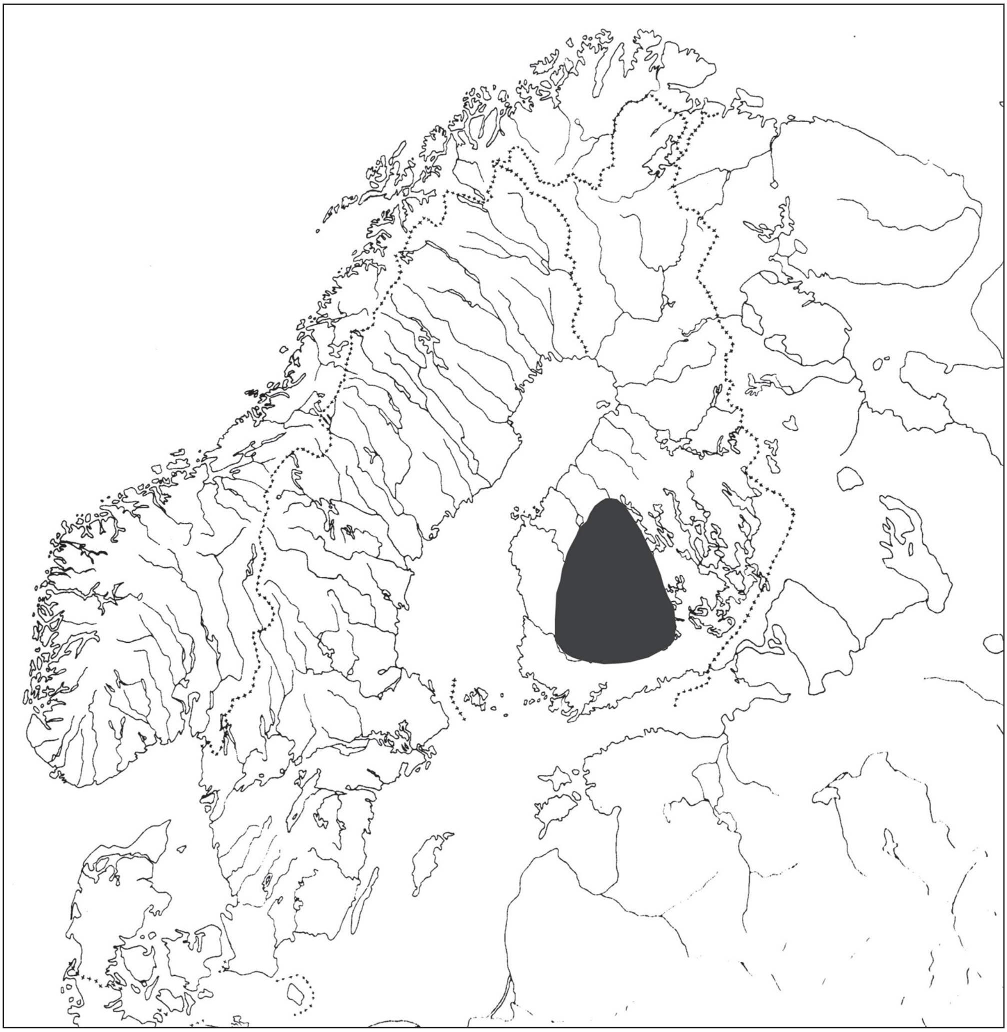

Figure 8.5 A coarse distribution area of the Middle-Zone ceramics (according to the description of Carpelan 1979: 14–15).

According to shore displacement chronologies, the first burial cairns may have been built on the coast in northern Ostrobothnia already in the middle of the third millennium BCE (Okkonen 2003: 236) and in the inland ca. 2000 BCE (Taavitsainen 2003: 8–9). In the inland, the end of the Neolithic Asbestos Ware has proved to be difficult to interpret because material available for dating is scanty. Most archaeologists support the model that there was a relatively stable continuity (Tallgren 1931: 79–80; Kivikoski 1961: 94; Huurre 1986a: 116–21).

The transition from the Late Neolithic to the Early Metal Age was one of the most conspicuous phenomena in the prehistory of the inland, with changes in the economy as well as the settlement structure. The material culture did not change immediately along with the introduction of agriculture although the amount of sites and finds were considerably reduced. The first Textile Ceramics, which represent a different tradition, have been dated to around 1900/1800 BCE (Carpelan 1999: 268–71; Lavento 2001: 106).

Seima axes, which were the first bronze axes in the northern coniferous zone between the Ural mountain ridge and Fennoscandia, were brought to the research area as ready-made implements. No local casting moulds made for Seima axes are known so far. The metal content of the early Finnish bronze finds refers to the ores in the Ural mountain range because of the considerable quantity of zinc (Meinander 1954b: 60–66). In northeastern Russia, the Seima bronzes triggered a new large-scale network system and changed the social structure of many small communities (Chernykh & Kuzminykh 1989). The Finnish sites were included in this trade after the earliest eastern Textile Ceramics.

The Early Metal Age sites had much in common with the Late Neolithic ones but the differences are prominent, too. The number of sites diminished almost in all of Finland during the Late Neolithic (Lavento 2001; Okkonen 2003). Their structure changed as well. The large, semi-sedentary village-like sites with large dwelling depressions disappeared and were replaced by smaller sites without dwelling depressions. In some regions, settlements disappeared entirely. Whether the Early Metal Age populations were descendants of the earlier inhabitants or whether they were replaced by possible newcomers has not been satisfactorily resolved so far.

Possible centres in Finland during the Bronze Age and Early Metal Age

In his discussion of the centres and peripheries in Bronze Age Scandinavia, Kristian Kristiansen pointed out the hunter–gatherers in northern Fennoscandia, which had less developed social hierarchies but which were still dominated by tribal elites. This was manifest in the spread of prestige goods and cairns. Southern Scandinavia belonged to the large European network system, but it had its own periphery on a regional and local scale. Kristiansen (1987: 77–83) also emphasized the alliances that strong chiefs wanted to establish by sending expeditions to distant areas with the results that these areas became partly integrated with the international network system of central and southern Europe.

Although chiefdoms may have existed in southern Scandinavia, the question of the central places has remained unanswered. No central places are known in the Early Bronze Age, but such sites have been found in the Late Bronze Age. Interestingly, Early Bronze Age societies were probably complex, which can be explained either by a spatial, fluctuating system or by the interaction of small social units. In the latter case, society was relatively egalitarian but specialized in preparing certain goods (Johansen *et al.* 2004: 51), providing the goods needed the complex interplay between different places. Today the remains of this interaction are visible through the mounds and pathways in southern Scandinavia. Although some mounds were built already during the Corded Ware phase, they were less monumental than at the beginning of the Early Bronze Age (Johansen *et al.* 2004: 52).

These examples provide some indications as to the possibilities of understanding Bronze Age society in Scandinavia. Although the examples approach the societies in the framework of the western Bronze Age, they still give interesting starting points for discussing the small groups living in northern Fennoscandia.

In the following, I will describe areas which can be considered as centres during the Bronze Age / Early Metal Age in Finland. Their main characteristics differ and their role in relation to the source areas varies. The position of the southwest coast is evident, but the inland deserves more attention. Figure 8.6 indicates that other centres could be distinguished on the coast and in Åland in particular. A discussion of these centres is beyond the scope of this chapter.

Despite concentrating on Finland, I will keep the large centres in southwest Scandinavia and Volga region in mind, and consider them as sources of possible impulses for the changes that took place in Finland. All the larger or minor centres were connected on a small or large scale (see Jørgensen & Olsen 1987; Baudou 1989, 1992; Forsberg 1989; Patrušev 2000; Žulnikov 2005; Lang 2007). The question needs more discussion, but in this chapter the emphasis has been put on the areas in Finland.

The southwest coast: imported Bronze Age culture?

A. Hackman (1897) and A. M. Tallgren (1931) have already emphasized the central role of southern Scandinavia in the emergence of the Bronze Age in Finland. Tallgren (1931: 79) argued for the existence of a "Great Denmark" that was so impressive that it dominated the whole Baltic Sea region. According to Tallgren, these people founded colonies in the same way as the Greek colonists in the Mediterranean in antiquity. The Finnish coast was included in the colonies.

Not all archaeologists shared the hypotheses. Aarne Äyräpää (1922: 187, 1958: 33) and C. F. Meinander (1954a, b) argued that the number of Early Bronze Age immigrants was very small. They argued that the local inhabitants were in active communication with the Scandinavians and this caused changes in the material culture. Carpelan (1982) followed basically the same lines of thinking although he has emphasized that the visitors were traders (see Tallgren 1931: 78). With the eastern context, in particular, he has underlined the role of eastern traders from the Volga-Kama region as the motors changing the societies in the larger area (Carpelan 2001).

Unto Salo (1981: 424–37) found it probable that the Bronze Age was launched in the coastal area by immigrating families. Heikki Matiskainen has supported the idea about a vassal system through the Mälar region by basing his argument on the exchange system of metal (Matiskainen 1998). Edgren (1992: 140–41, 1999: 291) has made a concluding summary of the long discussion. He mainly supports the model suggested by Meinander but he notes that in contemporary archaeology we should not agree without criticism that the new settlers were only men. Nevertheless Salo (2004: 140–41) has in turn moved closer to Tallgren's opinion and he has argued that the immigrants were males, who paddled to Finland in the same kinds of boats which are depicted in the rock carvings in Scandinavia. I have for my part recently (Lavento 2009) underlined the possibility of a two-way influence. Mutual visits may have taken place from the Finnish side of the Baltic Sea to the west and vice versa. The connections between the populations in the large area are well visible in northern Scandinavia, in particular (Jørgensen & Olsen 1987; Hulthén 1991; Baudou 1992).

However, the role of southern Scandinavian influence cannot be denied. The more than 10,000 burial cairns (Salo *et al.* 1992) indicate a considerable religious change.

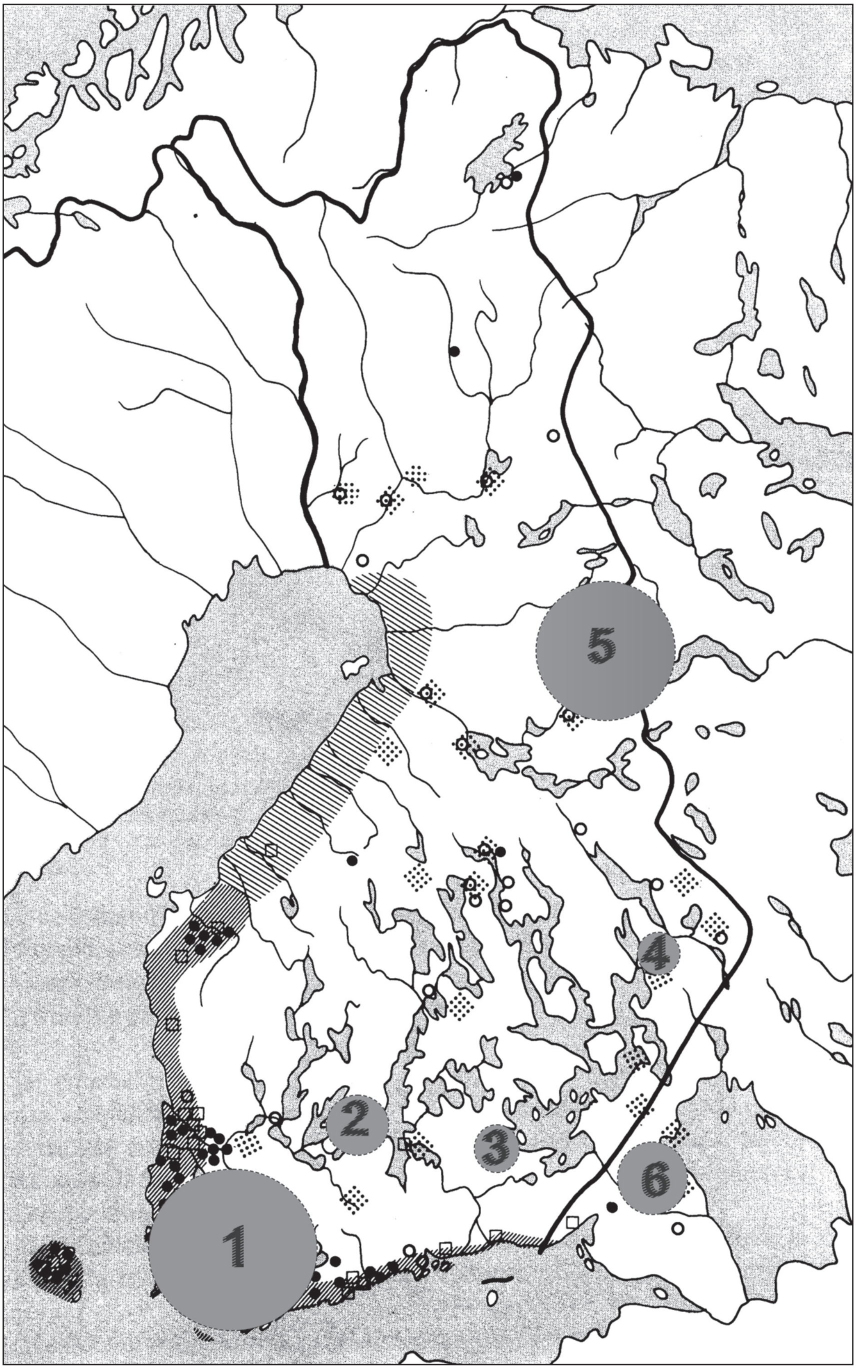

Figure 8.6 The main centre and minor centre in Finland and Karelian Isthmus during the Bronze Age and Early Metal Age. 1 – The southwest coast; 2 – the Sarsa region; 3 – the southwest part of the Lake Saimaa region; 4 – the northern Lake Saimaa region; 5 – the Suomussalmi region; 6 – the Karelian Isthmus on the western shore of Lake Ladoga.

Only a small number of cairns have been excavated, but some Scandinavian or central European implements are known: flanged axes, swords, spectacle-shaped brooches, bronze necklaces, jewellery, pinched grips, and razors. The earliest known golden plate in Finland, found in the municipality of Harjavalta in the lower course of the river Kokemäenjoki, can be connected without hesitation with the Scandinavian contacts (Kivikoski 1961: 87–94).

The settlement structure changed, new types of houses were built and societies changed (Seger 1981: 39–40; Matiskainen 1998; Koivulehto 1999: 211–27, 232–4; Salo 2004: 141–7). Nevertheless we have to keep in mind that the number of the known and at least partly excavated Bronze Age settlement sites is not larger than thirty (Salo 1981: 268–270).

Flanged and socketed axes are concentrated in the region of Turku province (and the Archipelago of southwestern Åboland). Mälar axes have been found all along the long coastal zone, i.e. the zone of the most intense concentrations of large cairns (for distribution see Lavento 2001: figs 8.5, 8.6; Lavento 2009). The large distribution area of cairns is interesting. It not only covers a long zone from the Bay of Vyborg to Northern Ostrobothnia but large parts of the inland as well. There seems to be some kind of transition zone between the Scandinavian-influenced area and the periphery. If the research area is extended to Russia one cannot avoid the Akozino axes, which indicate a network between the Middle Volga region and Scandinavia (Kuzminykh 1996).

The inland: the Early Metal Age and eastern influences

Although my division of sections follows the traditional approach between the coast and inland, the actual approach is somewhat different. I am searching for different smaller local groups, local centres – which have developed in various ways (Lavento 2005). The impulses for their emergence may have come from many directions, in many ways and changing their direction in different periods. All in all, the Early Metal Age is not so "eastern" and the western Bronze Age not so "western" as one might imagine. On the grounds of dwelling sites and find material, four concentrations can be found in contemporary Finland. On the Karelian Isthmus in Russia, one more group is distinguishable by using the data collected before World War II.

The Sarsa region: an early small centre with Textile Ceramics

Not far from the coast, there emerged an important site complex of textile-impressed ceramics, in the upper course of the River Kokemäenjoki, in Satakunta. This complex, called Sarsa, is named after the rapid Sarsankoski. The area is located between the coastal zone of Bronze Age culture and the inland culture. During the Late Neolithic it belonged to the Kiukainen group but above all it was inhabited by the makers of "Middle-Zone ceramics" (see above). According to Carpelan (1979: 14–15), the latter tradition continued and became the Sarsa type of Textile Ceramics, which had its roots in the Baltic countries. The Baltic influence in the Corded Ware ceramics was first suggested by A. Äyräpää (1933: 114). Because new radiocarbon dates of Estonian early Textile Ceramics indicate that the pottery is almost a thousand years older than was earlier thought (Kriiska *et al.* 2005), his idea fits the spread of the textile-impressed ceramics from the Baltic during the Late Neolithic in Finland.

C. F. Meinander (1954b: 206) pointed out that the pottery with textile impressions was concentrated between Sarsa (southern Finland) and Petrozavodsk (Lake Onega) in the east. Despite the similar decoration, the origin of these two traditions was in different directions – Sarsa in the Baltic region and Tomitsa in the Volga region (see discussion in Lavento 2001: 26–7).

Sarsa cannot be recognized as a centre by any other criterion except the pottery. Although there are older dates of Textile Pottery from the north (i.e. the Oulujoki water course), assuming that the Sarsa region continued the tradition of Middle-Zone ceramics it would represent the earliest Textile Ceramics in southern Finland. More dating samples of Sarsa pottery might change the picture. However, because the Sarsa Textile Ceramics has not been accelerator mass spectrometry (AMS) dated, an exact answer cannot be given. Summing up, the Sarsa region can be considered a small Early Metal Age centre that includes at least eleven sites in an area of roughly 10 km^2 (Lavento 2001).

The Ristiina region in the southern Lake Saimaa region

One small Early Metal Age centre was located in the southern part of Lake Saimaa, in the municipality of Ristiina. Archaeological surveys were carried out at the beginning of the 1990s and nine separate sites of about the same date were found within 10 km of each other (Lavento 2001: 237–40).

The Ristiina sites with Textile Ceramics are relatively small but they still refer to a centre. The main criterion is ceramics. The problem is that only one site has been excavated so far. Almost all the sites date solely to the Early Metal Age as opposed to the Sarsa sites which were in use at least from the Early Neolithic. Several features in the material culture indicate the influence of the coastal population deep in the inland. Another criterion for defining a centre is that there is a considerable number of Saami cairns in the municipality of Ristiina. The largest cairns are similar to those in the coastal zone.

The most important dwelling site in the area is Kitulansuo 4, which was excavated in 1994–5 (Lavento 1999). In addition to Textile Ceramics, Lausitz-influenced ceramics, typical of the coastal region in the southwest coast of Finland (Meinander 1954b), were found there. It is noteworthy that macrofossils of barley that date to the Early Metal Age were found (Lavento 2001: 142).

Varaslampi in the northern Lake Saimaa region

Varaslampi in the northern Lake Saimaa region is one of the largest Early Metal Age sites known so far in the inland. This site dates only to the Early Metal Age. Varaslampi is by the main waterway from Lake Saimaa to the east, on the neck of the River Pielisjoki, although it is today located by a small pond. The site was excavated at the beginning of the 1970s. Other dwelling sites dating to the same period have not been found nearby, although some dwelling sites with Textile Ceramics are known by the River Pielisjoki. There are also several sites within less than 100 km, but Varaslampi can still be considered as a small local centre. The reason why just this area was interpreted as a local centre is based on the unexceptionally large ceramic material in Varaslampi. This site and some other contemporary sites have an important location near the rapid between two large lakes – Lake Saimaa and Lake Pielinen – and the water connection continues to Russia.

The Textile Ceramics found at the Varaslampi site differ from the ceramics in Ristiina, indicating an eastern influence (Lavento 2001: 82–4). This can be explained by the network system to the Lake Onega region which was active already in the Late Neolithic. The first indicator of this was a copper ring at Suovaara in Polvijärvi, the neighboring municipality of Joensuu (Taavitsainen 1982), not far from Varaslampi. On the other hand, the local style is characterized by the use of talc and asbestos for tempering the ceramics. In this respect, it refers to the local tradition of Neolithic Asbestos Ware (Lavento 2001: 83–4, 231).

The amount of flint was exceptionally high at Varaslampi. Altogether, 60 flint scrapers, 233 flakes and over 300 other artefacts were found in the excavations. In comparison, the number of quartz scrapers is only around thirty. In Finland, all flint is imported and thus the connections to resource areas must have been solid. Again, eastern trade routes are very markedly visible.

The Suomussalmi region

As mentioned above, an Early Metal Age centre of considerable importance developed in the upper course of River Oulujoki, in the region of Suomussalmi in Kainuu (Huurre 1982, 1986a, b, 1992). The location in the intersections of good water courses both to the east and west was crucial for its importance. Another important factor was the availability of soapstone, a raw material used for making casting moulds. The material is easily available and it can be picked up on the shores of Lake Kiantajärvi. The main criteria for emphasizing the Suomussalmi area are ceramics, metal finds and local casting activity (Lavento 2001).

The Neolithic slash-and-burn cultivation of barley has been recorded in this northern region, in Puolanka, and ^{14}C-dated to 2690±80 (Vuorela 1999: 146); calibrated with 95.4% probability, this means that cultivation took place between 2340 and 1880 BCE. With regard to the geographic conditions, the date to around 2340 BCE or even some decades earlier is early indeed. As a matter of fact, the result is not accurate because of the long sediment profile that was used for conventional dating. Only one other ^{14}C date from a dwelling site is available in the Suomussalmi region during the Late Neolithic, from approximately 2000 BCE (Lavento 2004: 66–70).

The low number of dates indicates the decrease or even a short hiatus in settlement between the late Neolithic and Early Metal Age. After ca. 1800 BCE there were considerable changes. The important phenomena are the return of agriculture and production of Textile Pottery. Local metal casting was done on a large scale, and, in addition to almost twenty sites with Textile Ceramics, this indicates that the region was a centre. I will return to a detailed discussion about the character of the Suomussalmi region below. In this local centre, seven large sites with eastern Textile Ceramics have been excavated (Lavento 2001).

The Karelian Isthmus on the western shore of Lake Ladoga

A dense concentration of Early Metal Age settlement sites is known near the western coast of Lake Ladoga. There are important sites near the small lakes Riukjärvi and

Piiskunsalmi (Pälsi 1915) where thirty-two sites with Textile Ceramics in an area less than 10 km in diameter have been excavated. The number of sites is considerably smaller if they are connected with each other (Uino 1997: 236–40), but the important point is the large amount of ceramic finds from the Early Metal Age. The area is rich in Neolithic finds, but also the Early Metal Age and the Iron Age are clearly represented (Lavento 2001).

The eponymous site of the Kalmistonmäki ceramics (Meinander 1969: 42–3) by the River Vuoksi is worth mentioning here. Since the area is outside Finland today and represents the final phase of the Early Metal Age I will not discuss this site in further detail (see Lavento 2001, 2003).

Newcomers, continuity and mobile settlement: traditional explanations on the coast, open questions in the inland

Innovations that triggered the development of the Bronze Age and the Early Metal Age were perhaps caused by warriors or traders (Meinander 1954b; Carpelan 1982), families (Salo 1981) or the members of a vassal system (Matiskainen 1998). On the coast there was a long-term inter-relationship between the Finnish coast and Sweden (Lavento 2009).

In the inland, the possible newcomers or visitors played a central role in the development of the Early Metal Age. A good example of this is the Suomussalmi region, which needs further discussion here. This is because the area is the most prominent Early Metal Age local centre in the inland. For comparison, the importance of immigrants in the emergence of Bronze Age culture and centre on the southwest Finnish coast can be considered (Tallgren 1931). In Suomussalmi, cultural change was evident. The number of Late Neolithic Pöljä ceramics diminished ca. 2000 BCE and in the first millennium BCE they were replaced by Textile Ceramics. Afterwards, all the subtypes of the Säräisniemi 2 pottery were in use (Lavento 2001: 114–17).

The beginning of the Pöljä ceramics, which dominates the inland culture in the Late Neolithic, is better supported by ^{14}C dates than its end. The problem does not concern only the Suomussalmi region, it is possible that a hiatus or decline in settlement took place between the Late Neolithic and the beginning of the Early Metal Age.

In Karelia, the question to what extent the dates of the Late Neolithic Asbestos Ware of Palaiguba and Textile Ceramics are interlocked is yet to be resolved. However, a recent assumption is that the local, asbestos-tempered ceramics of Bokhta II type is synchronous with the Textile Pottery (Žulnikov 2005: 29–35). According to Alexandr Žulnikov, Bohta II ceramics continued the tradition of Asbestos ceramics.

Almost all dated Textile Pottery samples in Finland belong to the Early Metal Age. The situation is disputable, however. With the exception of ceramics, other material used for dating does not serve as solid argumentation for Early Metal Age settlement in the region because at many excavated sites the layers are mixed. The same settlement sites were actively used in the Neolithic and Early Metal Age.

Quartzite points which belong to a large group well-known in large areas in northern Fennoscandia indicate the networks in which Suomussalmi participated (Huurre 1982, 1983, 1986b). However, metal casting indicates impulses from the Middle and

Upper Volga region (Huurre 1986b; Patrušev 2000). Casting moulds made of local soapstone (Fi. *vuolukivi*, Sw. *täljsten*) are more numerous in Suomussalmi than anywhere else in Finland. In addition to soapstone, amphibole-chlorite stones were used (Huurre 1992: 45; Lavento & Hornytzkyj 1996). It is also worth noting that many of the artefacts from Suomussalmi are stray finds.

At present, there are three plausible explanations for the Early Metal Age population in Suomussalmi:

- The tradition represented by the Asbestos ceramics of Pöljä type continued between 2000 and 1800 cal BCE and was replaced by Textile Pottery (Carpelan 1999). The weakness of this explanation is that there are no dates between 2000 and 1800 cal BCE from the area.
- Two different populations lived in the area and their territories overlapped (Huurre 1982: 19–21, 1983: 243–5). An argument is the dating of Finland's oldest copper adze from Kukkosaari in Suomussalmi to ca. 2000 cal BCE. It evidently indicates the beginning of metal imports while Asbestos ceramics were still in use.
- There was a hiatus in the settlement history (Lavento 2004: 66–70). The main argument was mentioned above: a lack of dates from the Late Neolithic period.

Dwelling depressions are seldom discovered at Early Metal Age sites. The fall in the number of semi-sedentary settlement sites is dramatic compared with the Late Neolithic. This phenomenon is not limited to the Suomussalmi region but has also been observed in the lower courses of the large northern rivers Kemijoki, Iijoki and Oulujoki (Okkonen 2003).

Due to the lack of the remains of dwellings it is not possible to classify the Early Metal Age sites as either sedentary or semi-sedentary. The evidence rather indicates a new, more mobile type of settlement. The habitants settled down for a short period and then moved on to another region. The same is observable almost everywhere in Finland: large Early Metal Age sites are almost entirely missing.

The social structure might have undergone quite dramatic changes in southwest Finland due to strong external impulses. However, the transition of the dwelling system was less dramatic there than in the inland. Indigenous local populations continued their way of life along with the newcomers or visitors who brought the innovations to the coast. On the contrary, the influence of the indigenous population in the material culture is almost invisible in the inland, in eastern Finland and on the coast of Ostrobothnia.

Import of metals and production of bronze axes

Although copper and bronze implements were brought to the inland at the end of the Stone Age, metal was not yet actively used by local groups. In the early phase of the Early Metal Age, more metal was imported in the form of ready-made implements. Casting moulds indicate that at the beginning of the first millennium BCE, at the latest, local production of metal artefacts started in eastern Finland (Huurre 1992: 44). This is logical since this was the most active settlement period during the Early Metal Age in this region.

The likeliest copper source for Kainuu was the west side of Lake Onega (Žuravlev 1975, 1991). Unto Salo (2004: 148) has argued that local copper would have been available for the early metallurgists in eastern Finland. Nevertheless in the light of the presently available data this does not seem plausible (Huurre 1986a: 102–3). Instead, metal and objects were imported and the material was recycled.

When the Seima phenomenon (1700–1500 BCE) spread, the impulses moved from east to west at an intense tempo. The most supported theory explaining the arrival of the Seima metal assumes that the metal spread in the northern coniferous zone through tradesmen from the Kama-Volga region (Carpelan 1999: 268–71). Their activity did not last more than three centuries. Later, local groups exchanged and produced metal. Another possibility is that metal exchange between local groups started already at the beginning of the Early Bronze Age. Every drop of bronze can be classified as prestige goods and its circulation was evidently in the hands of local leaders or individuals with a high position in the local hierarchy. The appearance of metal meant the beginning of the development of a hierarchy. However, because the populations remained very small this has not been particularly visible in the archaeological material.

In the middle phase of the Early Metal Age (900–600 BCE), axes of the Akozino-Mälar type began to spread from two areas. One source area was the Lake Mälar region in Sweden (Kivikoski 1961: 93) and the other end of the distribution of bronze axes is the Middle Volga region (the eponymous site being the Akozino cemetery). The opposite direction of the spreading of axes, from east to west, has been suggested as well (Meinander 1985; Kuzminykh 1996). The spread of the bronzes depended on a well-working network system. In addition, because local casting began at the sites the re-use of bronze played a central role in the economy.

Contrary to the Seima phase, the Akozino-Mälar axes were produced locally in Finland, despite the lack of usable local raw copper. At this stage the spread of axes was an intercultural process in which the hunter–fishers in the Finnish inland participated. The region included at least five centres which were all favourably located in relation to waterways. The burial cairns developed first in the coastal region in west and southeast Finland but at the end of the second millennium BCE their building intensified also in the inland. There were clear connections between the coastal zone and the inland and between the inland and the centres near Lake Onega and Lake Sjamozero as well as by Lake Ladoga in Karelia.

For geographical reasons one would expect to find a prominent number of both Seima and Akozino-Mälar axes in Karelia. However, only one Mälar axe has been found there. Mark Kosmenko (1993: 77) dates the axe from Kudama XI by Lake Sjamozero to the first half of the first millennium BCE. He points out, though, that many Karelian sites are multi-period in character and dating them is difficult (Kosmenko 1993). The sites with Early Metal Age dates have much in common with similar sites in the Finnish inland. The sites are small; they do not have dwelling depressions and their most prominent find type is Textile Ceramics. Although the number of metals found at the sites is small, stone tools appear to have played a secondary role. There was probably more metal in circulation than what is preserved at the sites.

Neither Seima nor Mälar-Akozino axes may serve as defining attributes of local cultures because specific types of graves or ceramic types cannot be systematically connected with them. Contrary to this there is the concept of the Ananino culture which emerged in the eastern part of Karelia during the first half of the first millennium BCE.

The period was named after the excavation of the Ananino cemetery. This culture dates to 800–300 BCE (Tallgren 1919). Ananino axes were known in Scandinavia, but were not accompanied by the pottery or the burial tradition.

Ananino axes were cast in a vast area between the River Volga and northern Scandinavia, but only one single axe has been found in Finland. However, a considerable number of moulds for such axes are known in eastern Finland. On this basis, we might include Suomussalmi in the Ananino cultural sphere, because the casting of bronze axes seems to have taken place there. I rather suggest that the Suomussalmi region should be seen as a local centre of its own, more or less independent of the Ananino culture. The area was in contact with groups using Ananino ceramics but it was not a part of the culture. Ananino pottery is known at dwelling sites in Karelia (Žulnikov 2005: 35–6). The casting may have been carried out there because of the raw material available in the region. What role it played in the network system is uncertain. Suomussalmi may have been a transition area instead of being a centre with permanent agriculture, dwelling depressions, and stable settlement. Contacts were evident both eastwards and to the west which means that the local cultural features were many-sided and abundant.

After the Ananino phase, connections between the inland areas of Finland and faraway areas cannot be seen in the distribution of metals. Instead, from the fourth century CE, locally produced iron replaced bronze, although some bronze was still in circulation.

Summary

In the Bronze Age, Finland was a periphery between two centres: southern Scandinavia and the Middle/Upper Volga region. I have argued that within this periphery several smaller centres developed, which in turn influenced each other. They were different in character. They were most active in the second half of the second millennium and first half of the first millennium BCE. The coastal zone had contacts with other areas in Scandinavia. Cairns indicate the development of a hierarchical society. In the inland some small centres which were different in character developed. In practice, they are concentrations of sites with Textile Ceramics or some Early Metal Age ceramic types.

Though all local centres have been briefly discussed, emphasis has been put on one local centre in Suomussalmi. Its relationship with neighbouring areas in the east has also been approached on a large scale. The contemporary material shows that the casting moulds of Akozino-Mälar and Ananino axes were of great importance in recycling bronze in Finland.

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9

The Nordic Bronze Age and the Lüneburg culture: two different responses to social change

Sophie Bergerbrant

Introduction

It is often taken for granted in archaeological research projects that regions and their boundaries remain the same over time. Is this really true? Do different areas within a cultural geographical zone always respond in the same manner to new impulses or can the view of belonging to the same or similar culture change over time? This chapter aims to discuss the response to the new innovation of bronze within some areas in northern Europe: the so-called Nordic Bronze Age and the Lüneburg culture, mainly during the Middle Bronze Age (1600–1300 BCE). In order to compare the regions, central European chronological terms are used if nothing else is stated. The chapter builds on the author's PhD dissertation.

Regions and regionality

What are regional studies in archaeology? In a recent article by Kanter (2008) the concept is more or less equated with settlement studies in a larger environment, or what is alternatively called landscape archaeology. Kanter identifies a difference between the North American and European use of settlement archaeology. That is, European landscape archaeology encompasses a wider interest than that of North America, which focuses on spatial and ecological relationships, and European research includes other perspectives such as how people perceived their landscape, and so on (Kanter 2008: 38–41). But is it really that simple? Do and should regional studies in archaeology always discuss settlement patterns, even if including how people perceive it? Are there no other interesting regional patterns? Is there no need to discuss what a prehistoric region is? By focusing on settlement patterns the notion of prehistoric regions often becomes static, we need to bring other factors into our regional analysis to understand the dynamics of prehistory.

Kanter (2008: 41) claims that "in general, archaeological regions are spaces for which meaningful relationships can be defined between past human behaviour, the material signatures people left behind, and/or the varied and dynamic physical and social contexts in which human activity occurred". Kanter continues (rightly, in my opinion) by criticizing archaeologists who have defined their regions of study based on modern political borders or other current limitations in their research, rather than based on prehistoric data.

According to Gammeltoft and Sindbæk (2008), historical regionality is a much researched topic at the moment. They argue that this is due to at least two reasons. The first is argued to be the interest in identity and cultural difference, which is increasingly prevalent in academic circles; and the second reason is related to the new opportunities for this kind of study based on the information produced by new geographical information systems (GIS; Gammeltoft & Sindbæk 2008: 7). This chapter focuses on the former reason – the widespread interest in identity – rather than being a GIS-based study. How archaeologists in general use the term "regions" has been discussed and questioned by Helgesson (2008). He argues that we have to know why we are studying the region before we start. According to him, a region is not something that is made out of some dots on a distribution map (Helgesson 2008: 61). I would like to add that, as the case study below shows, we cannot assume that a region stays the same over an extended period, and this is something that has to be researched and considered for each time period. In my PhD I focused on four case studies in the larger region of southern Scandinavia and northern Germany. The results from these case studies are discussed here in the broader term of region and regionality.

Related to the study of regions is the study of borders and frontiers; this has for example been discussed in a book edited by Green and Perlman (1985a). However, these studies are generally focused on frontiers and/or behaviour in border zones. This research lacks by definition the focus on relationships between different cultural areas. Green and Perlman define frontier studies as studies that "direct their attention to peripheries or edge of particular societies" and considers that boundary studies "examine the interactions that occur at these societal edges" (Green & Perlman 1985b: 4). Studying frontiers and borders is of course important, especially as many new cultural meetings can occur in the border areas. However, these studies need to bring more social elements into their analysis to be fully fruitful.

Archaeological background

According to many authors, when the innovation of bronze became important in Europe it was followed by societal change, which led to a special character of the period (e.g. Coles & Harding 1979: 535; Harding 2000: 1–6; Kristiansen & Larsson 2005: 1). This change can for example be seen in the attitudes towards the body and gender (Kristiansen & Larsson 2005: 228; Bergerbrant 2007: 33–91), which are seen in the prevalence of razors, tweezers and other body-changing artefacts (Treherne 1995) regularly found in the burials.

In the Scandinavian Late Neolithic (2350–1700 BCE), flint daggers seem to have been the main male status symbol in the broad geographical area. It has been argued by Apel (2001: 338–42) that the Late Neolithic elite had their power base in flint production. The centre for this production is, according to Apel (2001: 272–3), in the

Valsømagle region and the Limfjord area. The latter is an area which one can see as a border area between the two period IB burial traditions, as well as the difference in Late Neolithic burial costume. However, there are both differences and similarities in the Late Neolithic burial traditions. Single burials under flat ground existed all over Denmark; however, this form of burial was more common in middle and southern Jutland. Single graves under a barrow only existed in the same areas as the later Sögel-Wohlde burial tradition. In northern Jutland and the Danish Isles interments in communal graves remained common all through the Late Neolithic (Vandkilde 1996: 277). The question discussed below is how the different Late Neolithic regions were influenced by the increased use of bronze in the area. The limits of what should be called the Bronze Age can be questioned (see Bergerbrant 2009), but here the traditional definitions will be used.

Vandkilde argues that already from the Corded Ware cultures in central Europe warriorhood played an important role in gaining prestige and becoming elite (Vandkilde 2007: 65). The important male warrior symbols were battle axes and mace heads (Vandkilde 2007: 68). Later, during the Bell Beaker phase, the male warrior symbols were pressure-flaked arrowheads, wrist guards (bracer), boar's tusk and a copper dagger and a bell-shaped beaker (Vandkilde 2007: 73). Vandkilde continues to show how the Middle and Late Bronze Age in central Europe becomes "the golden age of the sword" (Vandkilde 2007: 121); it is around 1600 BCE that swords first begin to appear in the central European material, then making a rapid appearance over vast areas of Europe during a very short time (Vandkilde 2007: 125). With it comes a general change in warriors' attitudes to appearances as shown by, for example, Treherne (1995).

In the Middle Bronze Age (1600–1300 BCE) many new social changes occurred in Europe. This can be seen in many different aspects of the European societies and burials (Coles & Harding 1979; Kristiansen 1998: 66–7; Harding 2000: 73–114). Objects that seem to have become important in many continental European cultures are the sword, razors, tweezers and different kinds of rings. A new ideology concerning warfare seems to emerge. There is a tendency to go from the use of daggers and bow and arrows to the use of swords and spearheads during the Bronze Age (Osgood 1998: 91; Harding 2000: 275, 2007: 71).

Regional areas

Early Middle Bronze Age, period IB 1600–1500 BCE

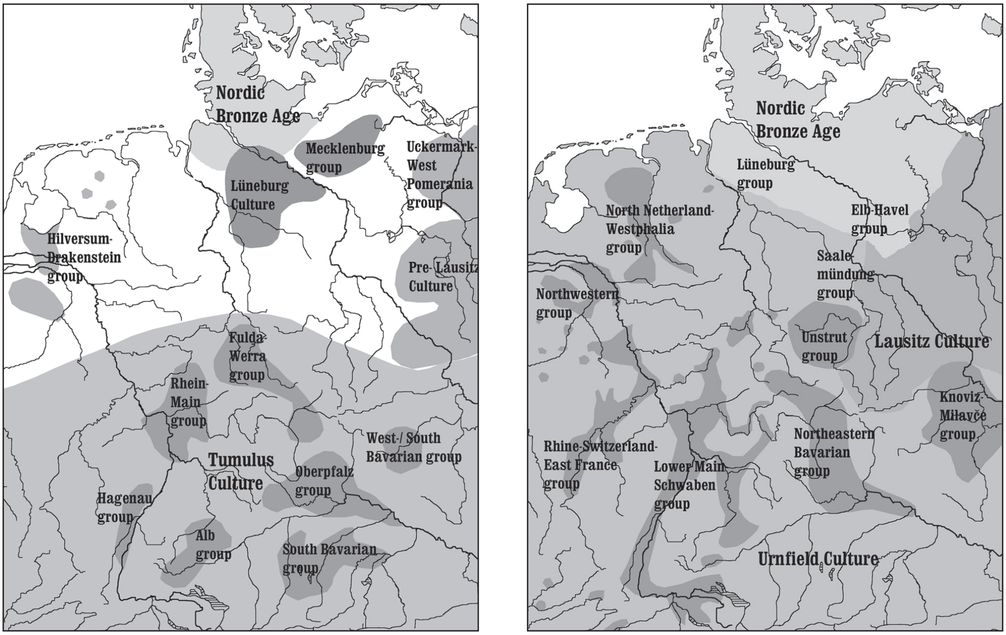
From the burial record dating to the early part of the Middle Bronze Age (period IB) one can see two traditions in southern Scandinavia, Schleswig-Holstein and Lower Saxony: the Sögel-Wohlde burial tradition and the Valsømagle burial tradition (Vandkilde 1996: 250; Bergerbrant 2007). The so-called Fårdrup style bronze artefacts cross the boundary between the so-called Valsømagle burial tradition and the Sögel-Wohlde burial tradition, and even though some of these objects are found in burials the large majority of them are found as stray finds or in hoards (Vandkilde 1996: 256–7).

These burial traditions concern mainly male burials as few female burials can be found in these areas. Due to the bad conservation of bone material generally, all we have to determine burials for either sex are the bronze artefacts. There seems to be no locally made, uniquely female equipment at the time. All unambiguous female burials are women wearing objects from other areas. There are clear differences in how the artefacts were used and in the burial patterns between the two cultures (Bergerbrant 2007: 43).

The Sögel-Wohlde burial tradition can be found from approximately the so-called Århus–Lemvig line (i.e. below these two geographical places, and down to the area around Hannover). The Valsømagle burial tradition is generally found north of the above-mentioned line and on the Danish Isles and in Scania (Vandkilde 1996: 289–90).

Period II (1500–1300 BCE) and period III (1300–1100 BCE)

During the following period (period II) the picture looks different. The above-mentioned burial traditions vanished and were replaced with the so-called Nordic Bronze Age and the Lüneburg culture. These two cultures have a different geographical distribution than the previous two. The Nordic Bronze Age can, simplified, be said to be found in southern Scandinavia down to around Hamburg and in the northwestern part of Lower Saxony, whereas the Lüneburg culture is generally found from the area around Hamburg to Hannover (see Figure 9.1).


Nordic Bronze Age
Mecklenburg group
Uckermark-West Pomerania group
Lüneburg Culture
Hilversum-Drakenstein group
Pre-Lausitz Culture
Fulda-Werra group
Rhein-Main group
West-/South Bavarian group
Tumulus Culture
Oberpfalz group
Hagenau group
Alb group
South Bavarian group
Nordic Bronze Age
Lüneburg group
North Netherland-Westphalia group
Elb-Havel group
Saale-mündung group
Northwestern group
Unstrut group
Lausitz Culture
Knoviz-Milavče group
Rhine-Switzerland-East France group
Lower Main Schwaben group
Northeastern Bavarian group
Urnfield Culture

Middle Bronze Age

Late Bronze Age

Figure 9.1 Distribution of different Bronze Age cultures and groups (based on map by G. Weber in Jockenhövel 1994: 14).

The Nordic Bronze Age

The Nordic Bronze Age culture has been given a very wide geographical area by some authors. In Swedish basic archaeology textbooks such as Burenhult (1991: 49ff.) and Hårdh (1993: 63) the Nordic Bronze Age culture covers an area from the Elbe to the Mälar Valley, including Norway up to Trøndelag. Bolin (1999) argued that the northern border of the culture should be drawn at least as far north as Ångermanland (northern Sweden). I would, however, argue for a different border that is farther south. Influences have obviously passed through the different geographical areas, but giving one culture name to such a large geographical area with so many different archaeological structures is problematic. By regarding it as one culture, as Bolin does (indirectly he interprets a Nordic Bronze Age culture that stretches from the River Elbe to the middle part of northern Sweden), the very notion of culture is diluted and perhaps even rendered meaningless.

Lüneburg culture

The physical border between the Lüneburg group and the Nordic Bronze Age culture is generally seen as the area north and east of the river Elbe, reaching into northwestern Lower Saxony (Stader Geest). Many earlier researchers have considered the Lüneburg culture to have been influenced, at least in its formation, by the south German Tumulus culture (Zimmermann 1988: 41). The southern border of the Lüneburg culture is south of Hannover.

Laux (1971: 90ff.) created a local typological sequence for the Lüneburg Heath (German: *Lüneburger Heide*) as he considered the artefact categories to differ too much from those of the Nordic and central European Bronze Age. Before Laux created his typology, the Montelius period system was the standard used by researchers. Even though Laux is right in his claim that the area's material culture diverges significantly from the Nordic Bronze Age culture during periods II and III, one must reject the idea of introducing a completely new typology for the area. This is particularly so in the light of the very detailed system that Laux proposed, which entails three different subgroups. In my opinion the region is not large enough to justify such a detailed chronological system distinct from the rest of the European chronological system, nor does Laux provide any reliable cross-checking of his stages with reference to parallels in the European Bronze Age chronological system, and this makes comparison with other areas much more difficult. This is unfortunate, as this region probably had an important role in the relations between the Nordic Bronze Age culture and its more southern contemporaries.

I have earlier related Laux's typological sequences with both the central European and the Nordic chronological sequence (Bergerbrant 2007: 28–32). The Nordic typological phases will be used in the text to make it easier for the reader to follow my arguments. Using the Nordic typological sequences means that some of the finer chronological sequences and details may be lost, but it is necessary to simplify the system in order to apply it to a large geographical and cultural area.

The burial evidence

I will compare the male graves and then the female burials from the areas of investigation in order to draw conclusions about the similarities and differences in dress between the different areas (see Figure 9.2). Which types of objects and how they are combined are also studied, as it helps us understand whether the different areas connect fully or partly to the same masculine and feminine ideals. The summary is based on the results from my PhD dissertation, and detailed discussions and references can be found there (Bergerbrant 2007: 33–91).

Male

The male burials contain artefacts that can be related to different categories: jewellery, toilet equipment, clothing-related artefacts, fire-lighting equipment and weaponry (see Figures 9.3 and 9.4). These categories will be the base for the comparison of the different areas. The categories are important because they give us information about how different ideals of masculinity are shown together in the different regions. They reveal whether the different regions emphasize similar or different masculine ideals, and which European areas they identified with.

In the Sögel-Wohlde region we can see that there are fairly regulated sets of burial assemblages, often including a dagger/sword and an axe, which are lacking in the Valsømagle region (Bergerbrant 2007: 39, 42). In the latter area we can see an experimental mentality emerging concerning different artefact combinations and object types. Razors, tweezers, belt hooks and so on are tested out and combined in different ways in different burials, and there seems to be no right or single way to do things. The lack of institutionalized hierarchical structures might have allowed for this

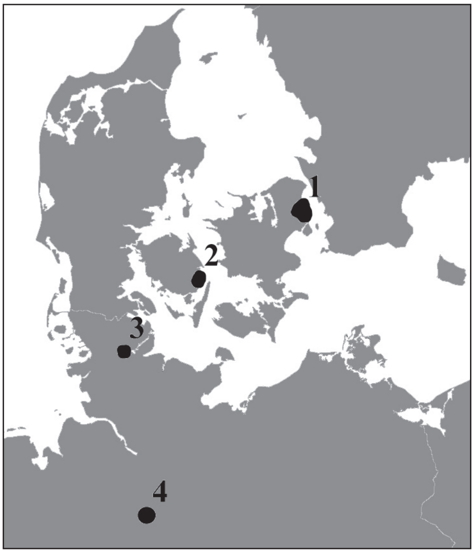


Figure 9.2 Areas of study: 1 – Copenhagen area; 2 – southeast Funen; 3 – Schleswig area; 4 – Wardböhmen and Bleckmar.

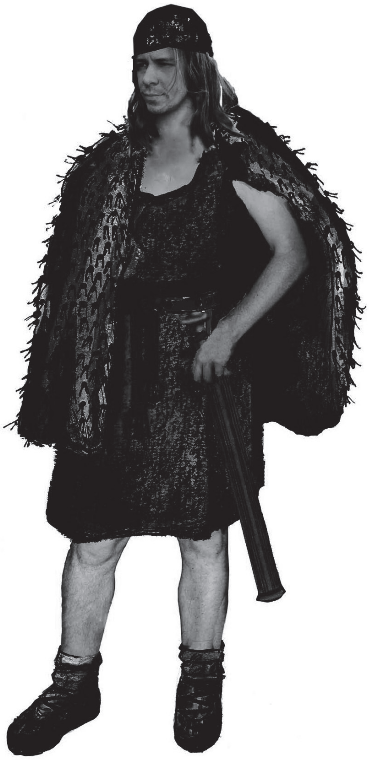


Figure 9.3 Trindhoj burial (reconstruction by Sigyn Stenqvist, © Bergerbrant & Stenqvist 2007).

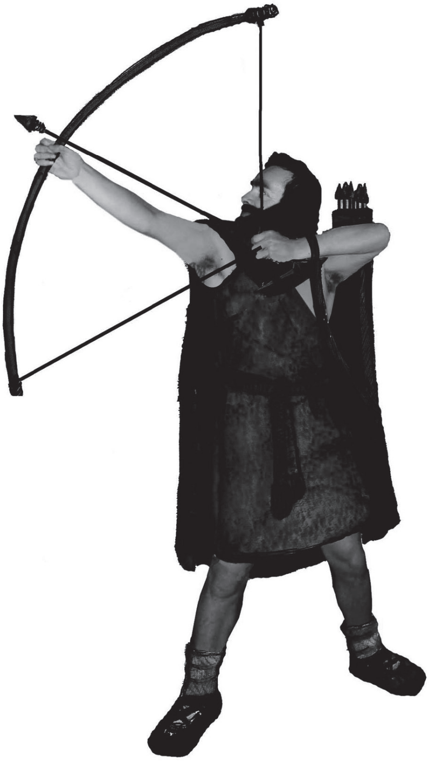


Figure 9.4 Grave II in mound 4, Hengstberg, Wardbohmen, Celle (reconstruction by Sigyn Stenqvist, © Bergerbrant & Stenqvist 2007).

wide exploration of ways to show and introduce the new European influences into the Valsømagle area. The formalized system that might go back to the Single Grave culture in the Sögel-Wohlde area might have hindered or delayed the acceptance of the new ways of showing status and identity that were created in Europe.

Pins vary in use and function across the areas studied. On the Lüneburg Heath they seem to have been used mainly as dress accessories, keeping the cloak together, whereas the pins in southern Scandinavia seem to have been used to hold a bag or pouch together. Even though I have not been able to find any reliable information about the placement of pins in the Lüneburg graves, the lack of small objects that could have been placed in a pouch or a bag indicates that there was no use for such a pin (there exist some plans of burials from Wardböhmen and Beckmar, but they are in the possession of Dr F. Laux and for the moment not available to other scholars). This, taken in combination with the placement of the pin in the Lüneburg male burial in Danevirke, increases the probability that the pins on the Lüneburg Heath were used as in Danevirke (Ke2338A). Here we can see that fairly similar objects are used differently in different areas (e.g. an individual on the Lüneburg Heath used a pin to hold the cloak together, while a fibula was used in Scandinavia for the same purpose). This can be seen, for example, in the following graves: Jestrup, Sønderhå parish, Hassing district, Thisted County (Ke5027); and Utersum, Föhr County, Schleswig-Holstein (Ke2653B).

Rings of various shapes and sizes are objects that can be regarded as "just jewellery", without any practical functions except for signalling different social messages. In the Lüneburg Heath arm-rings are common during periods II and III, whereas in southern Scandinavia they are uncommon during period II, but increase in popularity during period III, sometimes even appearing in the form of a gold arm-ring in male burials.

In many of the south Scandinavian burials from the Middle Bronze Age there is so-called toilet equipment (i.e. tweezers and razors). The presence of such objects increases from period II to period III. There seems therefore to be an increasing importance of grooming and body-changing practices over time; for example, toilet equipment was entirely absent from the period IB graves from the Schleswig area (i.e. the Sögel-Wohlde burial tradition), while both types exist from period II and onwards. However, in the Lüneburg Heath case study there was no toilet equipment present anywhere. There seems to be an increasing importance in maintaining and adorning the male body through the Middle Bronze Age. However, the ways males chose to do this seem to vary between southern Scandinavia and the Lüneburg Heath. Both cultures, however, strengthened their emphasis on the adorned male body, either by adding more types of jewellery or by using body-changing objects such as razors.

Fire-lighting equipment seems to be an important part of the southern Scandinavian male identity, and many graves contain flint strike-a-lights and pyrites (many more probably had pyrites, but they have not survived). A stone strike-a-light was found in only one of all the thirty-six male graves from Celle County. Why this great difference in male identity exists is hard to say. The all-important pouch that in Scandinavian contexts could contain many things, such as a flint strike-a-light, awls and toilet equipment, seems to be totally absent in the Lüneburg culture. Does this difference have a connection to different views of movement and travel? If one is essentially itinerant or ready to travel it might be handy to carry objects that help in everyday life, for example, enabling one to light a fire and to shave.

Another big difference between the two main regions is the weapons they chose to emphasize. In the Lüneburg Heath the bow and arrow seems to be the most important weapon. Axes and daggers are less common, and swords are missing. The daggers are generally fairly small. In Wardböhmen and Bleckmar there are twenty-three dagger blades, and most of them are fairly short. Only two are longer than 20 cm, and four dagger blades are particularly short, 10 cm long or less (Laux 1971: catalogue). The daggers are generally small compared with their Scandinavian counterpart.

One can say the men in the Lüneburg Heath are more closely related to the south German Lochham phase (Br B1, 1600–1500 BCE) male ideal of male standard equipment, i.e. wearing a dagger, an axe and a pin (Wels-Weyrauch *et al.* 1986). This is true even though for most of the time they emphasize the bow and arrow, and one can see an older European male ideal living on longer on the Lüneburg Heath than in many other European regions, an ideal that might go back to the Bell Beakers (Harding 2007: 52–4; Sarauw 2006). This contrasts with the south Scandinavian male ideal, which changes to the new European male ideal earlier than in Lower Saxony.

Even though the clothing seems to be of a general male northern European design, as the wrap-around from Emmer-Erfscheidenveen indicates (for further discussion see Bergerbrant 2007, 49–54), there are differences in the male cap. The cap found in Emmer-Erfscheidenveen (Comis 2003: 193–6) differed a lot from the ones found in the Nordic Bronze Age mounds. The cap is made out of sheepskin (Comis 2003: 194), in contrast to the ones found in the Danish oak-logs, which are made out of wool. The presence of *Lockenringen* in male graves on the Lüneburg Heath indicates that they also had a different cap to the south Scandinavian examples. Maybe the difference in the caps, when the other pieces of clothing were so similar, was a way in which clear distinctions in appearance could be created between the different cultural areas (following Wobst 1977). There seems to be two different kinds of headwear in southern Scandinavia, as seen in the Trindhøj burial; however, in this case there seems not to be a cultural/ethnic difference in the use of a woollen cap. Perhaps the important thing was the material one chose to make it in and the way in which it was adorned.

Female

As stated above there are no local exclusively female bronze artefacts from period IB, and the female burials that can be safely determined by the existence of bronze artefacts are all remains of so-called "foreign women" (Bergerbrant 2007: 34–7). However, one burial in Lower Saxony, Fallingbostel, has many components that can be seen in the period II and III female burials in the Lüneburg culture.

There are many clear differences in the female burials. Within the old Valsømagle area the female costume seems to be fairly uniform. A belt plate, neck collar, arm-rings and a dagger seem to all be part of a common traditions used and combined in similar ways. Both on Funen and in the Copenhagen area the women are more visible during period II, both in regard to the total number of graves and the number of bronze objects found in the graves. This is true even though the number of identifiable female burials is always low compared with the number of identifiable male graves. However, one major difference is the head gear. In Funen the placement of the fibula indicates that these are of a different style to the ones known from the Danish oak-log coffins. The only artefact within the area near Copenhagen that can be related to the head and the hairdo is the bronze comb found in Buddinge, and this indicates, together with the known examples of bone or horn combs from the well-preserved graves in other areas, that elaborate hairstyles may have been important; what they looked like is impossible to say, though.

The area around Schleswig has a different pattern that contrasts with that of the old Valsømagle area. Here there are no visible period II female graves; even if female-related objects are found in the period II hoard from Schleswig (Ke2402), they are not visible in the burial material. In period III we can for the first time see women through the presence of metal objects in the graves. Of course the woman buried in grave A from Schuby (Ke2412), which can only be dated roughly to the Middle Bronze Age, might have lived during period II. This, however, does not change the general picture in which a trend characterized by a growing visibility of females may be detected. It can generally be said that there are fewer and less abundantly furnished female burials in middle and southern Jutland and Schleswig-Holstein (i.e. most parts of the old Sögel-Wohlde region) than in northern Jutland and the Danish Isles during period II.

The female burials from Bleckmar and Wardböhmen, on the other hand, reveal a very different picture to that of the southern Scandinavian Middle Bronze Age. Of the gender determinable burials we have an almost equal split, with slightly more females. If one adds the indeterminable graves, we get about a third of each category (male, female and unknown gender). It seems like there is a surge in female visibility during the latter half of period II, compared with the situation in the Danish Isles, where there was a pronounced decrease of female visibility in the graves during period III. The high visibility of females can also be seen in some of the British Wessex Culture cemeteries (Harding 2000: 92). Similar to the Funen burials, the female graves are much more lavishly furnished with bronze objects than the contemporary period II male graves. In period III when the more exotic material, gold, becomes present, it seems to occur more commonly in male burials. However, jet beads, such as those found in mound 15 in Bleckmar, are an uncommon material that was imported from the British Isles (Thrane 1962: 19). It is difficult to say which was valued the most during the Bronze Age; there are more gold objects than jet beads in the southern Scandinavian Bronze Age, suggesting that jet may have been the rarer material.

One can see clear evidence of regionalism, as well as an overall area of uniformity, in the female dress throughout south Scandinavia. Certain artefact categories, such as the Bornholm fibula (for period III onwards) and bronze tubes, placed on the corded skirt, show a distinct and localized distribution (Oldeberg 1933: 40–7; Bergerbrant 2005). Differences in other areas are visible in artefact combinations rather than in distinct material types. Regionalism can also be seen in small-scale stylistic differences (see Rønne 1987a, b; Asingh & Rasmussen 1989). One clear example of local regional differences is observed in the headgear, comparing material from Funen and the Copenhagen area.

The short-sleeved blouse appears to have been a common piece of clothing in northern and middle Europe, and we have complete examples of it in Scandinavia (Broholm & Hald 1940) as well as remains in Lower Saxony (Hägg 1996a: 223–36) and Thuringia (Hägg 1996b: 139–40). Blouses seem, however, to have been combined in different ways. The example from Schwarza, Suhl, Thuringia appears to have been used in combination with a peplos-type cloak (Hägg 1996b: 139–40). Between my two research areas, however, the female clothing seems similar (i.e. made from similar fabric and into comparable outfits). Small differences occur, such as the example of a long-sleeved blouse in Lower Saxony (Hägg 1996a), and the possibility that the skirt in Lower Saxony was shorter than the examples from Scandinavia, suggested by the fact that it was more common in Lower Saxony to wear ankle rings than in Scandinavia. There is no remaining evidence of the corded skirt in Lower Saxony, but perhaps the corded skirt was worn with ankle rings. The big difference between the two groups is in the headgear. In many Scandinavian regions women seem to have had elaborate hairstyles and simpler hairnets, possibly worn with a few smaller bronze objects, whereas a number of women in Lower Saxony had complicated headdresses with many bronze artefacts added to them (see Figure 9.5). The style does not seem to have accompanied the women to Scandinavia when they moved there; we have, for example, a number of graves with Lüneburg wheel-headed pins, but no example of the typical Lüneburg head-dresses.

The disc-shaped pendants and the quill disc pendants are both used as parts of necklaces in the Lüneburg area, often in relation with bronze spirals. The use of these types of pendants as necklaces can also be seen in regions farther south. Wels-Weyrauch (1978: 31–2, 167, 1989, 1991: 15–16) shows that in southern Germany, these types of pendants were generally used either as a single pendant, placed in the neck region, or as part of a necklace placed on the upper torso. Here we can see that this part of the costume on the Lüneburg Heath is more similar to southern costumes than to the

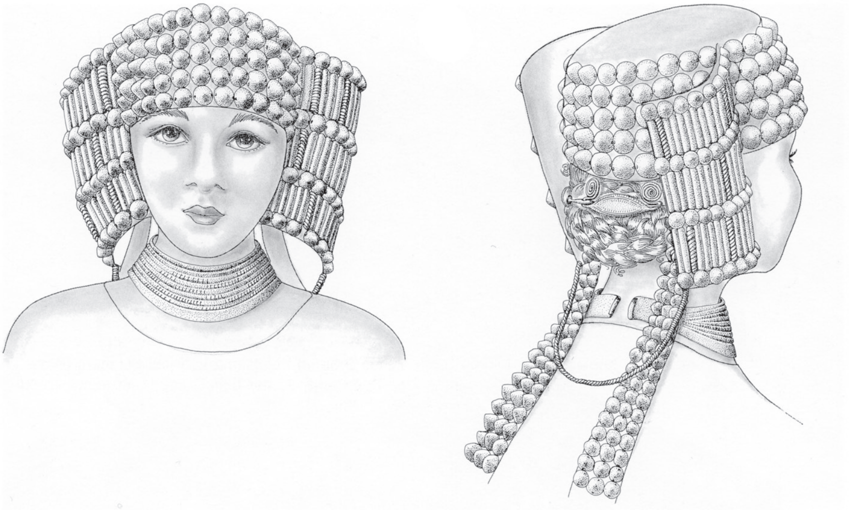


Figure 9.5 The Lüneburg winged bonnet drawn by Ulrike Wels-Weyrauch (from Wels-Weyrauch 1994: 62).

northern. Therefore one can say that the female costume on the Lüneburg Heath shares traits with both its northern and southern neighbours. Shared traits with the Fulda-Werra area include the neck collar, *Halsbergen*, neck-rings, disc pendants, the use of one wheel-headed pin, arm-rings, arm spirals and *Armbergen*. They differ from the Fulda-Werra region by the lack of spectacle-shaped pendants (German: *Brillenspiralen*) that generally are placed in the pelvic region (for the Fulda-Werra region see Wels-Weyrauch 1978: 167, 1989). With the southern Scandinavian region they share the use of neck collars, neck-rings, arm-rings and the use of round bronze discs (even if there are significant differences in how they are used, these regions are, to my knowledge, the only ones where round bronze discs are part of the female costume). One major difference is that daggers are not found in female graves on the Lüneburg Heath. Laux (1996a: 100) argues that the female costume in the Lüneburg culture originates in the foreign woman buried in Fallingbostel, dating to period IB, but this seems to be an oversimplified picture. Even if the woman buried in Fallingbostel clearly had a great impact on the region's future costume, we can also see this interplay with the female costume in the nearby regions.

Here we can see that there is no sharp line between northern and central Europe for the female costume. There seems to be a gradual changing of the bronze artefacts and possibly the clothing belonging to the female costume. Based on the artefact evidence a change in costume tradition between south and north seems to occur somewhere in the Rhein-Main area.

Appearance and regionality

We can see clear differences in both male and female burial appearance within the regions. The visibility of the two sexes seen through the bronze material varies between the regions. In Scandinavia, when women are visible the differences are not that great in the different regions. The main difference here is that in the Schleswig area women are hardly visible at all in the grave material during period II, while they reach peaks in terms of visibility in many of the other areas.

The trends observed in men also vary greatly. For example, many men are buried with more than one weapon in the Copenhagen and Schleswig areas, but they are buried only with a few items both on Funen and on the Lüneburg Heath during period II. However, the placement of the weapons and their relation to the body appears to be more standardized and is similar between Funen and the Copenhagen area and between the Schleswig area and the Lüneburg Heath. There seems to be a dramatic change between the fairly unified Sögel-Wohlde area during period IB and the Schleswig and Lüneburg area during period II. Despite this major change in burial traditions some of the older structures concerning how people relate to their objects seem to survive longer, and change only later.

As shown above there are probably two different main female variations, which are seen partly in the bronze objects, but mainly in the use of different headgear. The two groups probably had different social roles with different rights and responsibilities, but they both existed within a general overarching female ideal. Sørensen (1997) has already pointed to the existence of two different female categories for the central European Middle Bronze Age, seen through the bronze objects and their placement on the body. Therefore one can say that the structures of femaleness in both the Lüneburg Heath and the south Scandinavian Middle Bronze Age are similar to the wider European structure. However, there seem to be very different ways of how these two female categories are interpreted and the physical manifestation of this.

While we can see a basic similar structure – even if it is executed and interpreted differently – in the female burial, it is harder to see a basic male structure that crosses the border between the southern Scandinavian Middle Bronze Age and the Lüneburg Heath. The male principle seems to be of a very different kind in southern Scandinavia, especially during period II. The emphasis is on the male warrior and close-range fighting techniques, whereas the importance placed on the bow and arrow in the Lüneburg Heath seems to indicate a preference for another mode of fighting. This is true except for a short time during the latter part of period II, when arrowheads (i.e. indicating the use of a bow and arrow) are missing from the burials in Wardböhmen and Beckmar (Bergerbrant 2007: 81). However, the bow and arrow return later as the most important weapon. While the southern Scandinavian areas seem to share a general central European warrior ideal, although this takes slightly different forms on the body during period II, the connection with the general European warrior ideal seems to be strengthened during period III, not weakened, as in the case of the Lüneburg Heath.

To conclude, we can therefore say that regional differences between southern Scandinavia and the Lüneburg Heath can clearly be seen in the appearance of both men and women. However, even though regional differences exist within the southern Scandinavian culture, these are exhibited through the placement of artefacts on the body and the way they relate, rather than in different styles and types of artefacts. In the female equipment and appearance, in the Lüneburg area one can see contacts/networks with both central Europe and southern Scandinavia. For the female these network ties with central Europe exist, but they are scarce; however, despite their clear differences in appearance, the artefacts and the so-called foreign women from the Lüneburg area in southern Scandinavia (Bergerbrant 2007: 119–21, Bergerbrant 2008) show clear female networks between the two regions. On the male side these networks show very different traits. Where the Lüneburg men do not seem to connect clearly with any other regions, can one see clear networks/connections between central Europe and southern Scandinavia.

Discussion

As I have shown earlier (Bergerbrant 2007: 44–91) and above there are some clear differences in how deceased individuals were displayed in their burials between the two larger regions. A new cultural border appears for about 400 years. Then the distinct local appearance of the Lüneburg culture disappears and the area is again more closely associated with southern Scandinavia. How are we to make sense of this? For us to fully understand the developments much more research needs to be conducted, including looking at different classes of archaeological evidence such as hoards and settlements.

In the different areas, the female burial equipment varies the most; this is probably because there was no set norm in the preceding period of what exclusively female bronze artefacts should look like. In the Lüneburg culture area we can see that the female costume, at least the bronze artefacts, were influenced by a so-called foreign woman, whereas in the northern part of the Sögel-Wohlde burial tradition women stay fairly invisible for another two hundred years. And in the former Valsømagle region the classical Nordic Bronze Age female equipment is developed. There are clearly some artefact categories that can be said to be northern European; for example the neck-collar is a northern feature that exists in Scandinavia and down to the Fulda-Werra group of the Tumulus Culture (Wels-Weyrauch 1989: 120). In contrast, ankle-rings exist up the Lüneburg culture with only a few examples appearing in Scandinavia.

The picture is somewhat different on the male side. Here we can see many more similarities, even though some local variations exist (as discussed above) between the Danish Isles and the area down to around Hamburg. Here we can see a merger of the Sögel-Wohlde, where the burial record reveals a regulated and institutionalized appearance combined with the experimental Valsømagle appearance. In the two different traditions many central European ideals seem to meet and create what was to become the Nordic Bronze Age. For example, the tradition of burying people in single graves under mounds was introduced to the Danish Isles already during period I, whereas other structures took a longer time to be accepted across the different regions.

It is possible that it is a merger between these two cultures – the non-fixed, exploring Valsømagle area with the organized, regulated and institutionalized Sögel-Wohlde culture – that led to what became the so-called Nordic Bronze Age culture. The institutions of the Sögel-Wohlde region were slowly accepted in the Valsømagle region and the experimentation with form and shape in the Valsømagle area led to the new style of bronze objects that is so characteristic for southern Scandinavia.

It is hard to fully understand why the borders between the different areas move from the Århus–Lemvig line to the River Elbe. The Lüneburg area was probably a smaller unit within the larger Sögel-Wohlde group, which can be seen in artefact combinations in the graves (for detailed discussion about the weaponry and costume see Laux

1996a, b) that seem similar. Earlier I have demonstrated (Bergerbrant 2007: 41–42) that the combination of Sögel dagger/sword and Fritzlar axe is the most common, while the presence of a bow and arrow also separates the area from its neighbours. Maybe this local unit had some kind of crisis during the latter phases of period IB. The woman buried in Fallingbostel probably influenced this change in one way or another. She must have played an important role in society, as her costume came to be the inspiration for the clothing of subsequent generations of women in the area.

In order to study the social organization of the Middle Bronze Age, Johansen *et al.* (2003) used a method called network analysis. Their analysis is interesting, but it needs to be further developed and refined. They take into account the number of objects and the artefact types, and relate them to lines of barrows (Johansen *et al.* 2003: 44). As I have shown in my dissertation (Bergerbrant 2007: 73, 77–8) the placement of artefact types is important for understanding movement and contact within a larger region. Therefore to understand how these social networks worked we need to refine our analytical tool, and conduct more specific and varied analyses, including not only the artefact types but also information relating to how they were deposited. An object indicates contact, but tells us nothing about how this communication occurred. In order to understand this we need to compare the use of objects, in detail, between different regions. Without this kind of analysis we may be able to see the changes in different areas, such as the appearance of new cultural borders or the merging of areas, but we will never understand them.

It is of utmost importance to base regional studies on the archaeological record rather than modern administrative or cultural borders. Without this level of understanding regional analyses tell us nothing about the people who inhabited the landscape, only how the landscape was used during different time periods.

Conclusion

It seems that we have to take many things into consideration when we study regions and regionality. As the case study above demonstrates, it is clear that cultural affiliation can change over time and that new cultural groups may be created. The changes that the Middle Bronze Age brought to all of central and northern Europe led to the disintegration of old cultural ties and created new ones. However, to fully understand these changes more detailed studies need to be conducted, such as detailed network analyses taking into account not only the artefact types, but also the use/placement of objects on the body, and so on. It is clear, however, that people in prehistory were much more dynamic than many regional studies assume and it is therefore important to begin with a *tabula rasa* and define regional borders based on the actual evidence, support this with cogent arguments, and not simply rely on the more familiar lines on a modern map.

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10

Pottery, transmission and innovation in Mälardalen

Thomas Eriksson

Introduction

The focus of this study is influences and traditions in Bronze Age pottery in eastern central Sweden. It has often been used as a marker or even as a reagent for different inter-regional connections. For instance, burnished bowls and rustication with furrows have been seen as clear signs of Lusatian influence, or even that they were imported vessels from Poland. Today almost all kinds of bowls are routinely called Lusatian (from Lausitz). The term leads to a conceptual narrative analogy with other well-known terms like Hallstatt and Mörigen swords (i.e. imported high-status artefacts).

Pottery with striated surfaces, on the other hand, has been seen as an indication of eastern influence. However, striation occurs far beyond the eastern shore of the Baltic Sea. Ceramological analyses show that both the so-called eastern and Lusatian wares were made locally in central Sweden. The morphology of the vessels is clearly inspired by and often made in a "Lusatian" way. Hence the focus must be set on a more dynamic and multifaceted view of the course of innovations and implementation of ideas, customs and its materialization in artefacts. A model is presented to make it easier to discern different types of influence. The model is also an attempt to take a more dynamic view of pottery at different stages of influence and to show the way from innovation to tradition.

Pottery and external influences

Pottery has often been seen as an indicator of or even as a reagent for tracing and revealing foreign influences. Different morphological traits such as surfaces, vessel forms, temper and decorations have been seen as clear indicators of external influences. Certain traits have often been associated with particular ethnic groups. The ethnic bonds were a usual explanation before the 1950s in traditional culture-historical archaeology and the "Siedlungsarchäologie". Styles of pottery were seen as markers for specific tribes or peoples. The appearance of new styles has traditionally been interpreted as a sign of the arrival of a new tribe (e.g. Kossinna 1911; Childe 1930; Gimbutas

1965). In some ways this narrative is correct: it is probable that a specific ethnic group with a common language also had a more or less common material culture. However, it is not certain that similarities in material culture are necessarily due to a common language. There are many examples from ethnological and cultural anthropology showing that material culture and styles overlap ethnic groups (Barth 1969; Hodder 1982; Jones 1997: 112–27). Above all, styles can change without large migrations (Bentley & Maschner 2001; Gosselain 2008: 75–6). Style is mostly embedded with ideological and symbolic values (Hegmon 1992: 524–6). If the ideology changes, style and stylistic symbols also change, otherwise it can become meaningless. If a morphological trait should be seen as a marker of an influence, it must be dated. An innovation in a new context could be a marker of a new external influence. Nevertheless, a morphological trait that has already been incorporated in local traditions for centuries cannot be used in the same way. Special features are nonetheless often taken as proof of external influences, even though the features have been incorporated in the local tradition for centuries.

The Lusatian impact has often been emphasized in the literature about Scandinavian Bronze Age pottery. The eastern influence during the Late Bronze Age in central Sweden has been discussed in similar terms, with a focus on diffusion. One type of vessel or decoration is considered to be invented in one single region and the spread has been in one direction, often from the south to the north. Pottery can be one of the best artefacts for such studies, but it can also be a pitfall if dealt with as other imported goods. Archaeologists have a long tradition of studying imported metal artefacts such as Hallstatt and Mörigen swords, Fuchstadt cups and Únětice axes (Sprockhoff 1930; Thrane 1966, 1975; Baudou 1960; Randsborg 1972; Sørensen 1989; Vandkilde 1996;

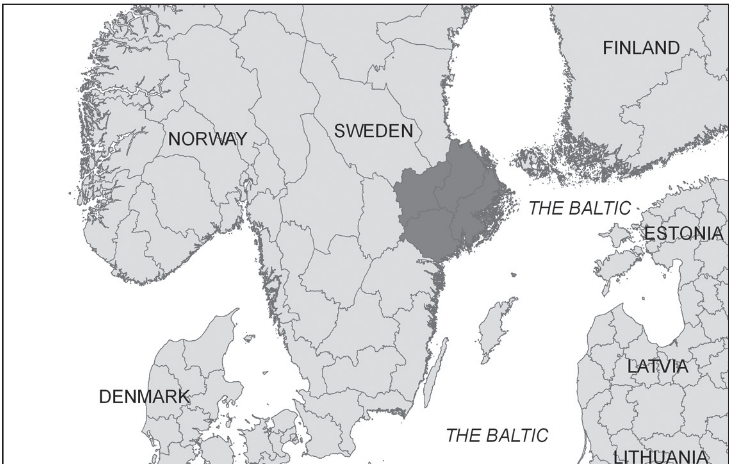

Figure 10.1 The area of investigation: the counties of Uppland, Västmanland and Södermanland (dark grey shading).

Kristiansen 1998). The model for studying transmission and contacts through objects of bronze is well known even if the interpretation of the magnitude and nature of contact is problematic. The problems arise if the same model and narrative is used on pottery. A Hallstatt sword found in central Sweden was probably manufactured in the region of the Hallstatt culture. However, so called Lusatian bowls found in central Sweden were probably not made in the Lusatian area. Names of artefacts associated with regions make up a conceptual discourse with supra-regional contacts, import and trade.

The course of innovation in pottery

We often forget that pottery is a whole group of artefacts with different functions, forms and status. Instead of seeing it as a homogeneous group we ought to treat pottery as different parts of various sets for eating, serving and storage, which have had different functions and status. A few of the vessel forms have probably been what Binford (1972) called sociotechnic artefacts, with a symbolic value embedded and used as social markers. Ritual vessels such as face urns and ceremonial vessels, as well as elaborate drinking vessels, could belong to this group. The majority of vessels have been domestic technomic items primarily made for practical use. To this group belongs, for example, storage and cooking vessels (Binford 1972: 23–6). The traditions of making vessels for these two different groups probably have different courses and timespans, courses that could be regarded as different *durées* according to the Annales school. The sociotechnic vessels were probably subjected to more stylistic changes and the technomic types were produced over longer periods. Above all, the production of pottery has had a different pace to the production and succession of styles on decorated bronze artefacts. The production of common, domestic ware has most probably been a long-term tradition, with few changes. Compared with the Neolithic periods, Bronze Age pottery is rarely decorated and has few other morphological and datable features. Even the fine ware in central Sweden is rather constant during the Bronze Age, with very small variations over time. However, the tradition is quite stable in the region with a fixed set of vessels from period II/III until period VI (i.e. 1400–500 BCE; Eriksson 2009).

The great resemblances between continental and central Swedish material can potentially be seen as a result of an ethnic movement in the old culture-historical way. However, it can also be interpreted as a cultural transmission in a wider social context, where table manners and traditions of feasting were spread beyond ethnic boundaries. One way to study this subject is to use innovation theory. An innovation is a novelty within a new context and is not necessarily an invention (Hägerstrand 1953; Rogers 1971, 2003; Eerkens & Lipo 2005, 2007). Innovations and influences are always transformed in the new context. Most innovations are short-lived and are not accepted and reproduced in the local surrounding. Energy is required to get innovations accepted. It must either have a strong support from some kind of elite, or connect to already known phenomena (Hayden 1998; Kristiansen & Larsson 2005: 8–31). Another possibility for acceptance is a very slow process where the innovation is introduced repeatedly. Innovations may also have had different impacts in different areas. There may be a “universalization” as well as a “parochialization” in neighbouring areas due to the extent that novelties are accepted (Odner 2000: 34–6). Different innovations and morphological traits can therefore appear unevenly distributed in space. Referring to ceramics, it is important to quantify different traits and not just map the existence of the traits. Above all it is important to see them in a dynamic time scale.

A model of innovation in time

A model (see Figure 10.2) is needed in order to understand the process of innovation. One model specifically for pottery can be:

1. **Innovation** through external influence
   - **A.** Imported vessels
   - **B.** Vessels made by foreign potters in a new region
2. **Local implementation**: form, function and manufacture is negotiated and transformed to suit the domestic tradition in a dialectical process.
   - **C.** Vessels are locally made but in a foreign style. The outer morphology is close to the original model, but ware, temper and so on can be different from the foreign prototype.
3. **Tradition**. Parts of the external influences have merged with the local tradition into a revised, new tradition.
   - **D.** Single foreign features have inspired the local tradition. The new traits have been transformed to suit the local tradition in novel combinations.
   - **E.** The influences have been incorporated into the local tradition and can no longer be seen as a marker of foreign impact.

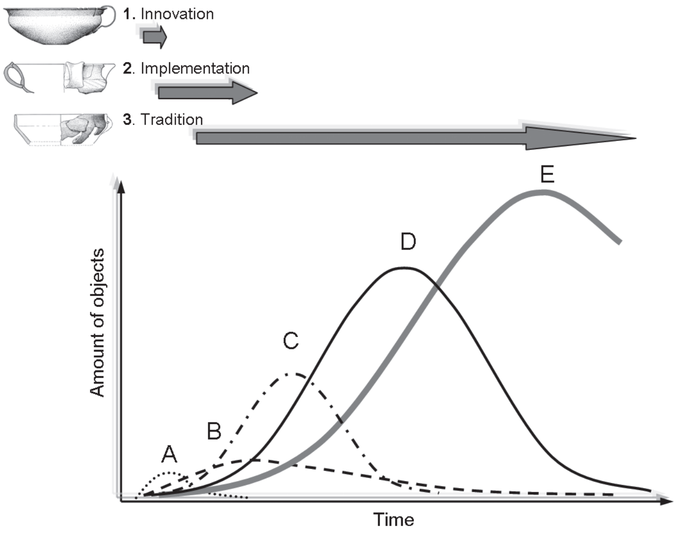

Figure 10.2 Model of innovation, implementation and their stages to become a tradition (see text above for explanation of types A–E; illustration by T. Eriksson).

In the discussion of influences in pottery, we have to distinguish between the phases above. Innovations can happen through external influences, but can of course also be due to internal development. If innovation and implementation happens through external influences it can presumably occur quite rapidly, in the span of a couple of decades or one generation. There are many examples of this in Swedish folk art and furniture since the sixteenth century CE and onwards (types A–C, Figure 10.2). After the implementation, decoration and forms were often reproduced for centuries. Forms from the Renaissance were innovations due to external influence during the fifteenth century but survived in Scanian furniture until the nineteenth century. However, decoration of renaissance character made in the nineteenth century must be considered a local tradition and cannot any longer be regarded as a sign of external influences (type E, Figure 10.2). The same is true with pottery. The pottery tradition in central Sweden seem to be quite stable during long periods of time. The periods of stable traditions could last for up to half a millennium with few innovations. During this stable period, or *longue-durée,* the tradition could partly be the same as another tradition in neighbouring regions (Braudel [1969] 1982: viii). Many new forms or decoration in that area were never accepted in central Sweden. Older traits were preserved instead and were sometimes mixed with morphological forms influenced from other traditions.

One example is the use of cords on rusticated jars in the Late Bronze Age. It is a very common trait in Scania during the Late Bronze Age, but the decoration did not occur in the ceramic tradition in the area around the Mälaren Basin (Björhem & Säfvestad 1993; Eriksson 2009: 117–23, 221). The use of whole jars as bone containers did not become more widespread in the latter area. One reason might have been ideological and ritual. The cord decoration could be seen as symbolic neck rings, as a type of bronze rings in clay that made the urns anthropomorphic. Face urns are contemporary with the use of cords in southern Scandinavia. They are an obvious anthropomorphic symbol and must have had a special part in the grave rituals. Face urns are very rare in central Sweden as is the use of entire ceramic vessels in the graves. These traits show that pottery played different roles in rituals and tradition in the different areas and that decoration can be used to trace the ideological differences.

The southern influences

The pottery tradition in Sweden in c. 1400–500 BCE, at least south of the Dalälven river, shows many similarities with the material from central Europe (Poland, Germany, Czech Republic, Slovakia and Hungary). The similarities cannot be explained without cultural and personal transmission. In Swedish literature the Lusatian culture has been seen as the origin of this tradition and the narrative has been quite diffused. All bowls are considered as Lusatian and rusticated jars with finger-furrows are considered to have been imported from Poland. The Lusatian impact on the pottery is a reality, but must be discussed and nuanced. First, the Lusatian pottery should not be seen as a signifier for a single culture. The “Lusatian” pottery should rather be seen as representative of a style spread over a vast area from the Balkans and northern Italy in the south to Norway and Sweden in the north (Gardawski 1976: 131–49). The frequencies and variations of surface treatment, decoration and vessel forms have varied over this region. Almost all

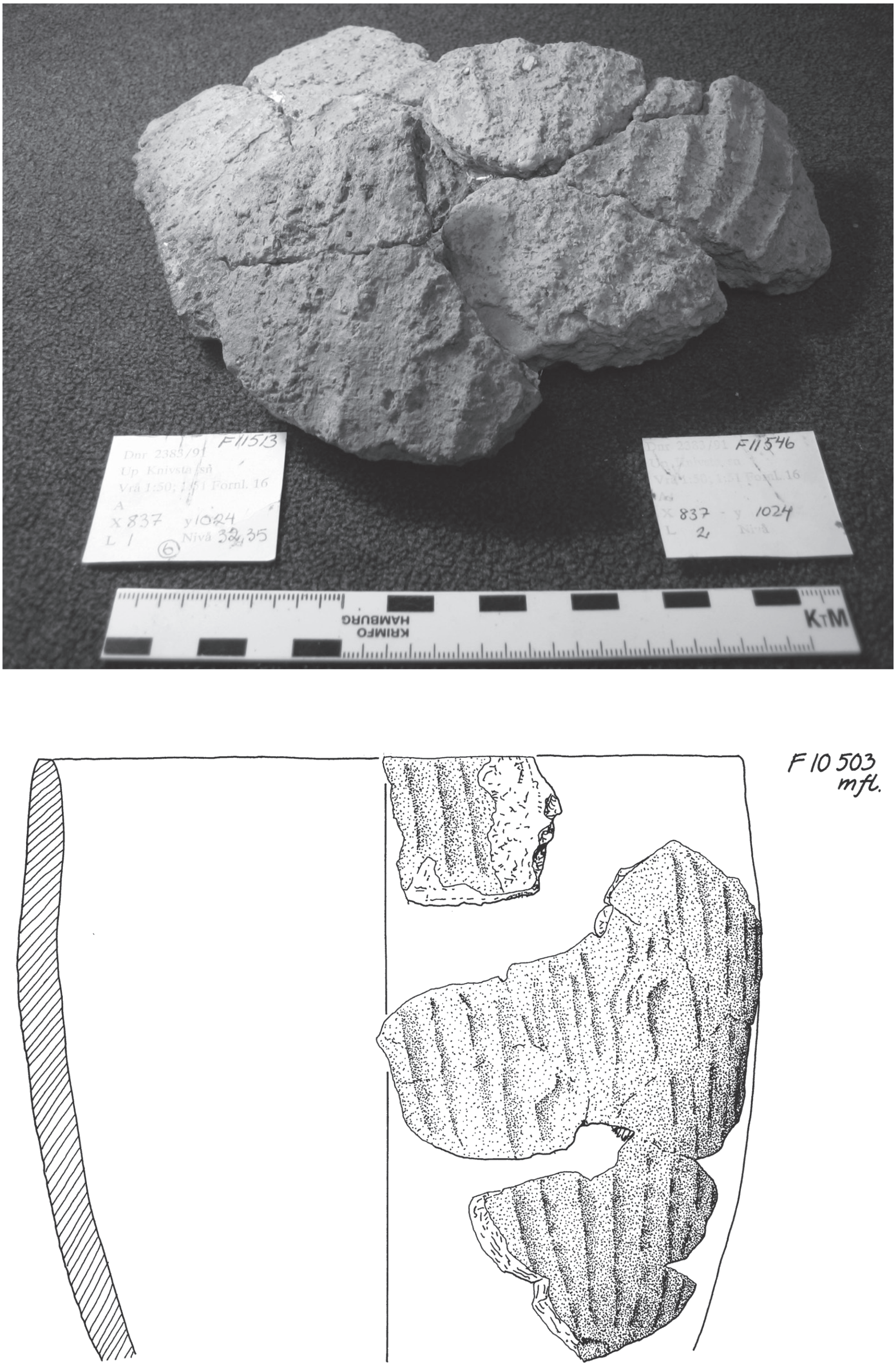
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Figure 10.3 Rusticated jar from the settlement at Vrå in Uppland. The fragments have an AMS dating to periods I and II (Eriksson 2002; photograph by T. Eriksson).

the attributes and vessel forms in Sweden have their counterparts in central Europe. On the other hand, almost all of the more remarkable forms and decorations – the key forms of the Lusatian tradition – are missing in central Sweden. For instance, the "Buckeldekor", jugs, vases, more advanced forms of "Rillendekor" and ritual vessels are missing in the Lake Mälaren Basin.

Second, the process of cultural transmission must be dated and correlated between Scandinavia and the continent. The emergence of burnished bowls and rusticated jars in Sweden has often been dated by finds in graves in southern Scandinavia. Thanks to the advances in ^{14}C-dating, it is possible to date the actual vessels. As shown below, the new dates will revise the course of events and the processes of cultural transmission must be reinterpreted.

Bronze Age pottery with its burnished bowls and rusticated jars has often been seen as a significant trait for the Late Bronze Age (Hulthén 1977: 212; Jaanusson 1981: 40; Persson 2001: 300–02; Lindahl *et al.* 2002: 81–6; Stålbom 1998: 111–13). The pottery was often associated with the introduction of cremation burials (Stjernquist 1961: 118–20; Stålbom 1994: 28; Carlsson 1995; Kaliff 2001: 49ff.). This is due to the fact that the old chronology relied on find combinations from graves. Pottery is uncommon in Scandinavian graves before period IV. Typologies and chronologies are therefore difficult to ascertain for periods I—III. Rusticated pottery begins to appear in graves in period IV due to changes in grave rituals, but was in use at the settlements earlier. Today we have ^{14}C dates of organic residues inside rusticated jars in central Sweden. The material comes from settlements and the dates show that rusticated surfaces came into use already around 1500–1400 BCE (Eriksson 2009). That date corresponds to period II. There are dates from contexts with rusticated A-group pottery from Fosie in Scania that verify this early date, but they have not been noticed (Björhem & Säfvestad 1993: 55). Rusticated surfaces are also common in the Únětice, Hatvan and Trzciniec cultures during the late Neolithic period in central Europe and in northern Germany during period I (Eriksson 2009; Zich 1996: 4). The rusticated surface is therefore an innovation during the Early Bronze Age. The abundant use of pottery in southern Scandinavian grave rituals was thus an innovation in period IV. But many of the types of vessels used in the rituals were already old.

The burnished bowls with handles have also been seen as artefacts that characterize the Late Bronze Age. The term "Lusatian bowls" has been used during recent decades and the type has been considered to be endogenous for the Lusatian culture (Carlsson 1995; Kaliff 2001: 48–55; Asplund 2008: 208–9). The shape of the cups or bowls is hard to explain without mentioning different types of metal cups from periods II and III of the Bronze Age (Thrane 1963; Sherratt 1997). The metal cups seem to have been ceremonial drinking utensils connected to the new aristocracy in Europe. Their shape was originally inspired by ceramic models (Sherratt 1997). The next step of development was that the shape inspired pottery bowls in northern Europe. The handles of the pottery bowls are often joined by pegs into the body of the vessel, a joint that imitates the joints of the metal vessels. This kind of joint is seen in pottery bowls in Hungary as well as in Uppland (Sofaer 2006: 134–7). The handles are often fluted, a decoration that is common on metal bowls from periods II and III, as exemplified by the central European Fuchsstadt and Jensovice cups from periods III and IV (Thrane 1963, 1966: 159–72). A metal bowl from the famous Kivik cairn is probably the earliest in Sweden. The bowl is very fragmented but seems to be of the same type as a bowl from period II,

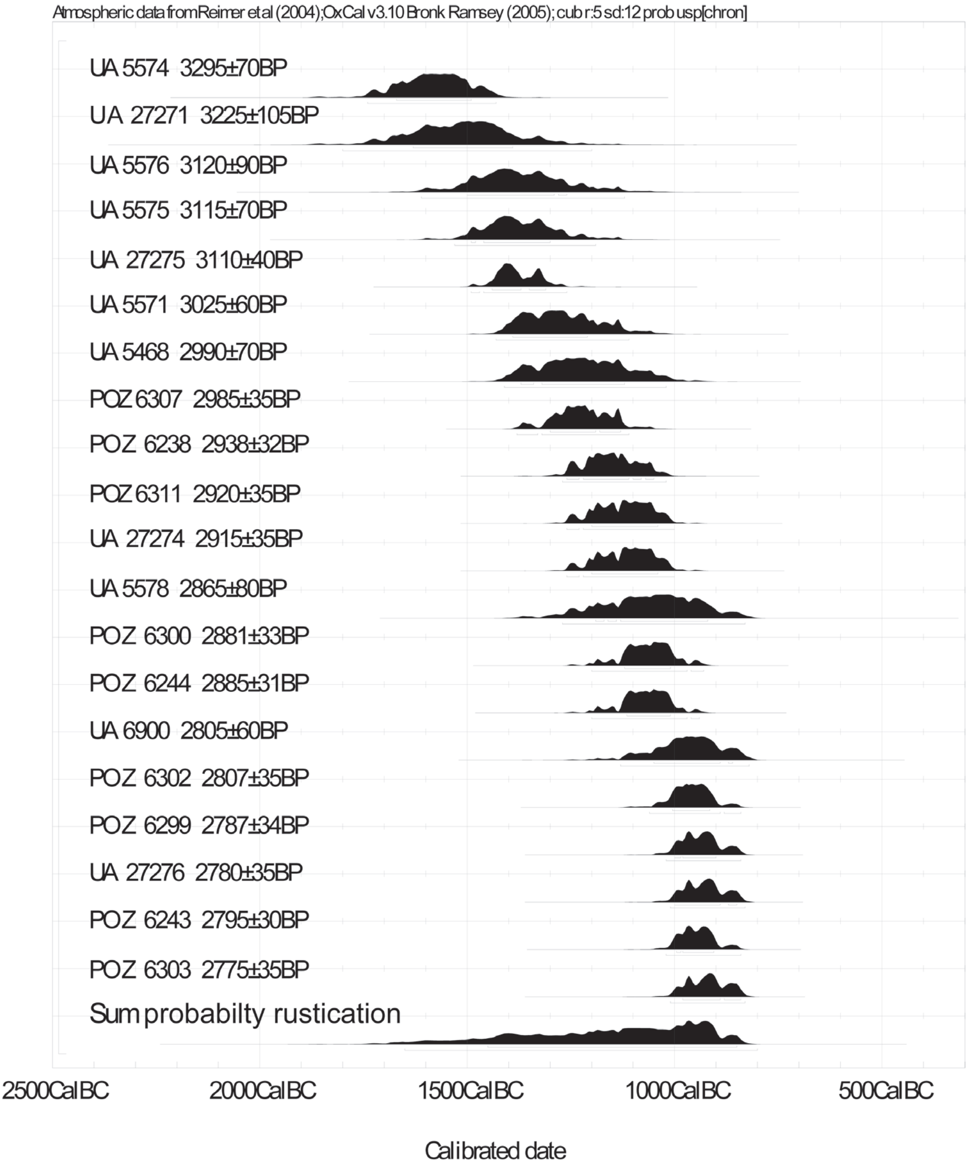

Figure 10.4 AMS datings of organic residues on rusticated pottery in Uppland.

found in a mound at Gyldensgaard, Østermarie parish at Bornholm (Randsborg 1993: 54–8; Jensen 2002: 257–9). Even the lustre of the burnished bowls seems to imitate the lustre of metal bowls.

The bowls also appear in the Únětice culture. There are bowls from period I graves in Jutland with almost the same form, but without a proper handle (Aner & Kersten 1976: 1292; Zich 1996: 44–50). As the bowls are not commonly found in graves and seldom contain datable organic residues, they are difficult to date. Two contexts in central Sweden might be an indication of the date of their first appearance. The first is a well at the settlement at Apalle, Övergran parish in Uppland. The well contained animal bones, part of a human skull and other human fragments, and the most remarkable finds were at least five pottery bowls made of thin clay, delicately decorated with diagonal flutes. The handles were joined by pegs and the surfaces were brilliantly burnished. Interestingly, the bottom of the well is dated to period III (Ullén 1995: 12–22; Eriksson 2003: 107–9). Contemporary counterparts to the bowls are found in Etruria, central Europe and in the Lusatian culture (Eriksson 2003: 109; Karlsson 2006: 82–119). We therefore have to make distinctions in the Lusatian impact on this type of bowl. The type was not a Lusatian invention and is common in many parts of Europe at the time of the Tumulus cultures (c. 1600–1200 BCE). The term "Lusatian bowls" is therefore somewhat misleading. We have to presume an influence from metal bowls and ceremonial drinking during the early Bronze Age. In the Late Bronze Age these pottery bowls are so common that they can not be seen as signs of aristocratic drinking, or as signs of foreign influences. They had become part of the native culture in Scandinavia as well as in the Lusatian and other cultures in central and northern Europe.

This kind of Bronze Age pottery, with rusticated jars and burnished bowls, was produced until the end of the Bronze Age. During the transition to the pre-Roman Iron Age (c. 500 BCE), pottery making changed fundamentally in the region. The old tradition with pottery expressing an ideology of collective feasting was replaced with a coarser ware (Eriksson 2009).

The eastern influences

The region around Lake Mälaren is geographically close to Estonia, Latvia and Finland, which affected the network for personal contacts, and thereby material culture. The eastern influences in the pottery of central Sweden have been discussed since the end of the 1950s. The phenomena have often been associated with the so-called Mälardal axe, which was initially thought to be of local origin and dated stylistically to period IV (Baudou 1953: 246–53). Today we know that the types in Mälardalen were made of Uralian copper and the style of the axes originated in Russia, Belorussia, Finland and/or Latvia (Kresten 2005). The type and its variants should, according to Russian nomenclature, be named KAM (Kel'ty Akozinsko Melarskie) or Mälar axes. The axes and the pottery have been difficult to date. All the axes found in Sweden are stray finds with no datable context and have often been treated as one type, even though it is a group of types. The Mälar axes have a different chorological distribution. The Bornholm type might have been produced somewhere in the southern part of the Baltic. The Norwegian type has a main distribution in western Scandinavia. One mould for an eastern type at KAM axe is found in Maglomaj-Varris, Lapland, northern Sweden (Eriksson 2009: 250). Many axes are found in the Kama region in central Russia, but these types do not correspond directly to the types found in Scandinavia (compare Baudou 1960 with Kuz'minykh 1996: 6–10). The axes in central Russia are now mainly dated to periods V and VI, which is later than described in the Scandinavian literature (Schwerin von Krosigh 1989; Parzinger 1998: 211–13;). Stylistically, the axes found in Sweden have been dated to period IV, but one ^{14}C dating of a wooden shaft belongs to period VI and the early pre-Roman Iron Age (Hjärthner-Holdar 1998: 38).

In the Bronze Age, pottery of eastern character is found in different contexts, especially along the former coastal area of central Sweden. This was first noticed at excavations in Broby, Börje parish and Darsgärde, Skederid parish in Uppland (Ambrosiani 1959; Schönbäck 1959). The pottery in Broby was first associated with the Dyakovo culture in the area around Moscow. Today the finds from Broby should rather be seen as pottery of north Scandinavian or possibly Finnish/Estonian types. The Darsgärde pottery has been identified as Estonian or Finnish Ilmandu or Morby pottery (Ambrosiani 1959; Schönbäck 1959; Reisborg 1989; Lang 2007). The identification of the so-called eastern pottery is mainly based on decoration and above all, the surface treatment. Pottery with striation and textile impressions has been seen almost as proof of eastern influences from Russia, Finland, Estonia or Latvia (Jaanusson 1981; Hjärthner-Holdar 1993). The problem is that textile impression also appears in Poland and central Europe in the early Bronze Age. At least one find in Södermanland from the early Bronze Age may be connected to southern influences rather than eastern (Ericsson 2005: 30–33). The few examples of textile impression in central Sweden can often be dated to the Pre-Roman and the Roman Iron Age (Eriksson 2009).

Striated surfaces are even more complicated than the textile impressions. Striation is common on pottery in Estonia, Lithuania and Latvia in the Bronze Age and Early

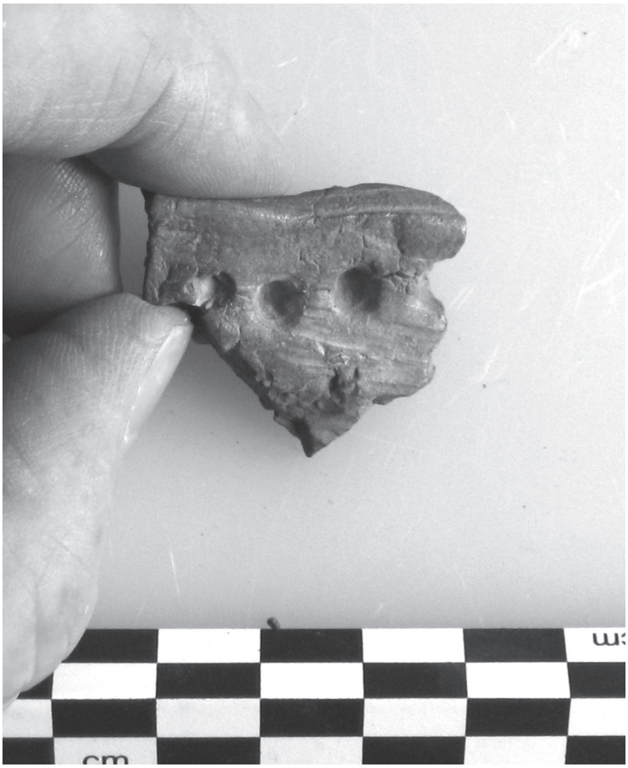

Figure 10.5 Striated rim fragment with a row of pits below the rim. The fragment is dated to the ninth century BCE and belongs to the Morby tradition. From a settlement at Svanby in northern Uppland (Renck 2004; photograph by T. Eriksson).

Iron Age, as well as in the Textile Ceramics pottery tradition in Sarsa-Tomitsa and later cultures in Finland, Estonia, Latvia and Russia (Vasks 1991; Lavento 2001; Lang 2007: 127–36). Furthermore, it is not uncommon in, for instance, the Lusatian culture. Different kinds of brushed surfaces or irregular striated impressions exist in many areas around the Baltic Sea until the Roman Iron Age. In addition, making grass impressions on the wattle-and-daub walls of houses was an indigenous tradition in central Sweden. The impressions on the walls are very similar to one type of striation on pottery. As a single morphological trait, striation cannot be seen as a significant marker for a special culture or ethnicity. Striation is more frequent in the eastern area but cannot be considered as the only sign of external influences in central Sweden.

There is pottery in Uppland with brushed surfaces, more regular strokes that can be considered a striation of a southern kind. Striated surfaces also exist, often with more irregular patterns, combined with a fine ware and decorations in the form of impressions of, for example, pits and combs. This type begins to appear along the coastline around the tenth or ninth century BCE. The outstanding site is Darsgärde due to the large amount of material. The layer with the eastern material is unfortunately undated. The only artefact associated with the context is an axe of the Mälar type. That gives an approximate date to Bronze Age period V–VI or the Early Iron Age. The pottery has a richness in decoration combined with striated surfaces and textile impression, as do its counterparts in southwestern Finland and western Estonia (Reisborg 1989: 85–101; Lang 2007: 127–36; Asplund 2008: 210–31). Pots of more local type were also found at the site (e.g. rusticated jars and burnished bowls), but they are in a minority (Reisborg 1989). The pottery at the site is so deviant in Scandinavia that it is impossible to explain it without considering migration. There are several sites with pottery, especially with striated surfaces and decorated with pits. The sites are mainly distributed in

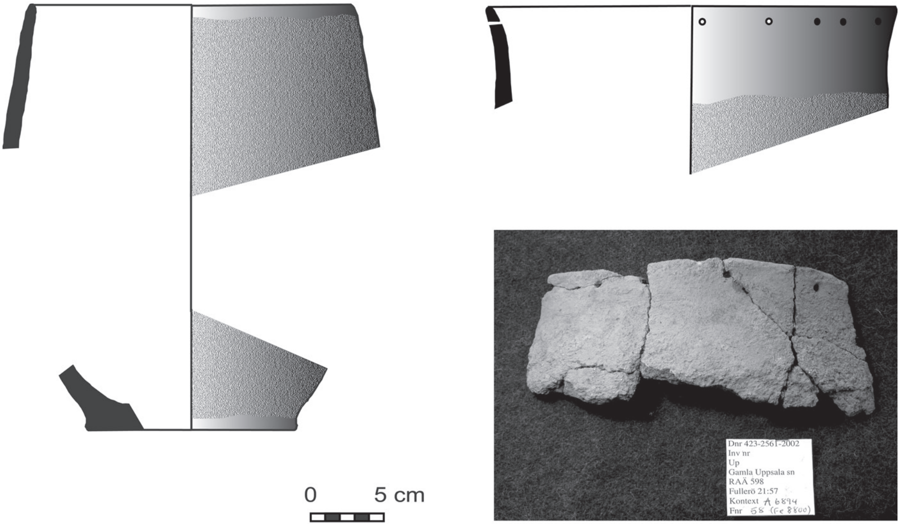

Figure 10.6 A rusticated vessel from Fullerö near Gamla Uppsala, Uppland (Björck & Appelgren 2006). The decoration with pits is an eastern trait on an otherwise "Scandinavian" vessel. Photograph by T. Eriksson.

the eastern part of the region but also appear around Uppsala. ^{14}C dates show that it is a phenomenon that appears in period V–VI and the pre-Roman Iron Age. The amount of eastern-influenced pottery is often in a minority at the settlements and in burials. An exception is the hill settlement at Darsgärde and some sites in the former eastern archipelago near Stockholm. Thin-section analysis shows that this type of pottery generally does not differ from the pots that are of a more Scandinavian character, indicating that it is most likely locally-made pottery of stage C–E (Figure 10.2). The next step is that some types of decoration are integrated into the local tradition. For instance, rows of pits – an eastern trait – are common on rusticated jars of more Scandinavian type. The decoration and combination can be seen as an example of stage D (Figure 10.2). This type of decoration is not common in southern Scandinavia; however, it is common in Finland, Estonia and the coast of Latvia (Reisborg 1989; Lang 2007: 127–36; Asplund 2008).

Striation is common in the region around Lake Mälaren at the end of the Bronze Age until the Roman Iron Age. It is in a minority at most sites, but it is so common that the surface alone cannot be seen as a sign of external influences, even though people sometimes do (e.g. Onsten-Molander *et al.* 2008: 144). Striation became part of the local culture in the Mälaren Basin, especially during the pre-Roman and Early Roman Iron Age. The tradition is shared especially with Balts, Finno-Ugrians and to a lesser extent with some of the Germanic peoples on the continent. Decoration combined with striation is at this stage no longer common, which differs from the contemporary Morby pottery in Finland and some of the Estonian traditions (Lang 2007).

Summary

Pottery has often been used to delimit and define cultures, and singular morphological traits are sometimes used to prove contacts and influences. We need a more dynamic and nuanced attitude to pottery as a source for observing innovations and influences. Chronology cannot be neglected, and must be combined with theory of innovations to study cultural transmission.

New AMS dates of pottery in central Sweden have revised the course of events. Rusticated pottery, with and without finger-furrows, was an innovation in the region in period II. Burnished bowls are more difficult to date, but seem to belong to period III and subsequent periods during the Bronze Age. Both types have often been dated to the Late Bronze Age. Instead, we should see them as a part of a continental package that influenced the Scandinavian Bronze Age. The pottery came almost at the same time as novelties such as the three-aisled house, razors, and ornaments such as tutuli and dress-pins. The pottery must have been influenced by continental Europe at this stage. In the Late Bronze Age those shapes were adopted and used within a local tradition. The tradition or style was shared with the Lusatian culture at this stage but did not depend on it. Most of the Lusatian key forms in pottery in the Late Bronze Age were not used in central Sweden.

We have material dated to period V and onwards that cannot be explained except by transmissions from the eastern shores of the Baltic Sea. Many of those eastern traits were incorporated in the local tradition in period VI. The pots were locally made, and eastern traits were mixed with the local traditions in a new way, creating a hybrid form. The tradition shared features mostly with the southern Scandinavian pottery, but also had eastern characteristics, developing into a domestic tradition in the Mälaren Basin.

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11

Social landscapes of Bronze Age Scandinavia

Peter Skoglund

Why do some material expressions have an uneven distribution (i.e. they occur in large numbers in some regions and in limited, or very few numbers, in other regions)? A similar uneven distribution of material culture expressions could also be studied on a smaller-scale level, where certain locales are loaded with symbolic expressions that make them stand out as unique in a comparative perspective.

In Scandinavian Bronze Age research, the uneven distribution of bronze items, rock art and burial monuments has often been explained by referring to individuals. In this explanatory framework the irregular distribution of valuable objects, symbolic expressions and monuments reflects the power of individuals (i.e. chiefs who through their supreme position were able to channel labour into monumental and symbolic manifestations of power; Larsson 1986; Kristiansen 1998; Kristiansen & Larsson 2005).

In this chapter I propose a shift in focus from individuals to the geographical framework that power operated within. The power of individuals was linked to networks with a spatial extension. Even though there were contacts over very large distances in the Bronze Age (Kristiansen & Larsson 2005), the chiefs – or people in command of power – operated within smaller regions on an everyday basis.

As pointed out by Adam T. Smith on the background of a study of early complex polities, politics is not directly about territories, or urbanism or architecture; it is about the production and reproduction of authority. However, authority is constantly constituted in the ordering of landscapes (Smith 2003: 280).

It is in the nature of any group to claim possession of the land they inhabit by references to oral traditions, maps, texts, monuments or memories (Zedeño 2008: 213). Material culture like grave monuments or rock carvings might therefore not only be used in place-bound rituals, but also in a wider geographical setting where they, together with other kinds of material culture, marked the boundaries and interaction zones between different groups of people (cf. Burenhult 1980; Kristiansen 2002; Coles 2005).

Spatial thinking has tended to be either concerned with maps, analysis and explanations or interested in space as a mental construct and its social significance. According to Edward Soja we should try to integrate these approaches; but also to move beyond them and regard space as a lived experience, used by various groups of people to make statements about the world (Soja 1996).

The above-mentioned dichotomies are at hand in Scandinavian landscape archaeology as well. On the one hand there are studies dealing with issues of territoriality (Larsson 1986; Wigren 1987). Here landscape is regarded as an abstract space where territories are marked by clusters of monuments reflecting habitation areas. On the other hand there are studies dealing with landscape as an experienced space; here issues like agency and rituals are frequently discussed (Gröhn 2004; Skoglund 2005). What is lacking is social landscape archaeology where monuments are regarded as important ingredients in the shaping and reproduction of various regional and social identities.

Important in Soja's thinking is also the notion of borderlands, or a third space (i.e. areas in between different cultures or social groups, where various interests have to negotiate and new ideas are likely to develop; Soja 1996: 127). These kinds of meeting places facilitate new ideas and production of knowledge by combining different ideas, events and meanings. They are open to redefinition and expansion in new directions.

If we accept the ideas of Bronze Age monuments marking boundaries between different groups of people, it is also relevant to bring in the notion of meeting places set apart from areas for living and working. However the notion of borderlands, or a third place, should in this archaeological context not be taken literally but as a reminder that social landscape archaeology is not just about the legitimizing of power relations; but equally about the questioning and redefinition of existing social principles. In the Bronze Age such places were presumably most likely to develop at a distance from the everyday world, at the interaction zones between different regions, where people met, negotiated and exchanged ideas.

In earlier studies I have demonstrated that Scandinavia in the Bronze Age was made up of a patchy pattern of smaller regions (Skoglund 2005). However, these different regions were bound to each other through the exchange of ideas and goods. Regions bounded to each other by intense contacts made up what could be labelled the inter-regional level. Finally, there was the Scandinavian Bronze Age culture stretching from northern Germany to the area of Trondheim, Norway, in the north.

In this chapter I will try to characterize three different inter-regional areas: the Baltic, the Danish archipelago and the North Sea. I will argue that these areas can be identified in different kinds of media, and I will pay special attention to the use of ship symbolism in the various inter-regions. Moreover, I will argue that the contact zones, between these three inter-regions (i.e. eastern Scania and northern Bohuslän, in present-day Sweden), due to their geographical positions, were regions where people from different inter-regions met and exchanged goods and ideas. Before going into the discussion I will pay attention to the maritime setting of Bronze Age Scandinavia.

A maritime perspective

The Scandinavian Peninsula together with Jutland and the Danish islands constitute what might be labelled an archipelago. This is the way Scandinavia was perceived by Roman travellers. For example, Pliny the Elder in the first century CE described Scandinavia as consisting of several islands (Grane 2003: 134).

Therefore it is no surprise that the Scandinavian Bronze Age is full of references to ships and seascapes; ships were depicted in rock art (cf. Malmer 1981) and on metal items (Kaul 1998), and in parallel to these pictures there were also graves built in the shape of stone ships (Müller-Wille 1970; Capelle 1986, 1995; Artelius 1996; Skoglund 2008). The very variety of the contexts in which ships are represented suggests that these representations were not intended simply to remind viewers of real ships, but of what ships stood for; that is, these ships are, at least in part, symbolic.

In a recent study of rock carvings in northern Bohuslän, Johan Ling demonstrates that rock art had a close spatial relationship to the Bronze Age shore line which in this area was about 15 metres above the present-day sea-level. Ling argues that the carvings that are totally dominated by ships were made in connection to a maritime praxis including transport by real wooden ships (Ling 2008).

Ling's conclusions are drawn from a detailed study of a specific region, and an interesting question is how far this perspective can be generalized; should all ship symbols in the Scandinavian Bronze Age be considered as part of a maritime setting, or are there differences between different regions and inter-regions? Considering the great differences in the geographical layout of Scandinavia it is possible to argue that there were three different maritime milieus in the Bronze Age, with their own distinct geographical settings, and probably also ways of living.

The first area comprised present-day Denmark and adjoining areas in south Halland and west Scania in Sweden. The second area comprised the Baltic coastline from west Scania to the Mälaren region. The third region comprised north Bohuslän in Sweden and the Norwegian coastline up to Trøndelag in central Norway (see Figure 11.1). The first area is defined by flat areas suitable for agriculture, while the second and third areas are characterized by rocky areas and moraines, which are less suitable for agriculture. Therefore in the second and third regions we should expect fishing to have played a more substantial part of the everyday activities of people.

These differences between areas with greater and lesser potential for agriculture might also be reflected in the distribution of different types of Bronze Age monuments. Mounds made of turf and soil dominate in the areas with good-quality soils in Denmark, and when they do appear in restricted parts of Sweden and Norway, it is generally on soils suitable for agriculture. Conversely, cairns dominate in those areas that are less suitable for agriculture.

Accepting the idea that the mounds in the flat, sandy and clayey areas of Denmark and restricted flat areas of Sweden and Norway were raised in areas where cattle breeding and agriculture were important (c.f. Rasmussen 1993), we could at least hypothetically assume that cairns in the coastal areas of the North Sea and the Baltic were built by people who were dependent upon the sea to make their living (cf. Skoglund 2007). However, the Baltic and the North Sea were divided by the Danish archipelago and therefore there was no direct contact between these regions.

In the following these differences will be discussed from a maritime perspective by discussing the ship symbolism in the three inter-regions.

The Baltic

The Swedish coastline from Blekinge to Uppland and the islands of Bornholm and Gotland in the Baltic is characterized by ship settings (i.e. monuments of stone shaped

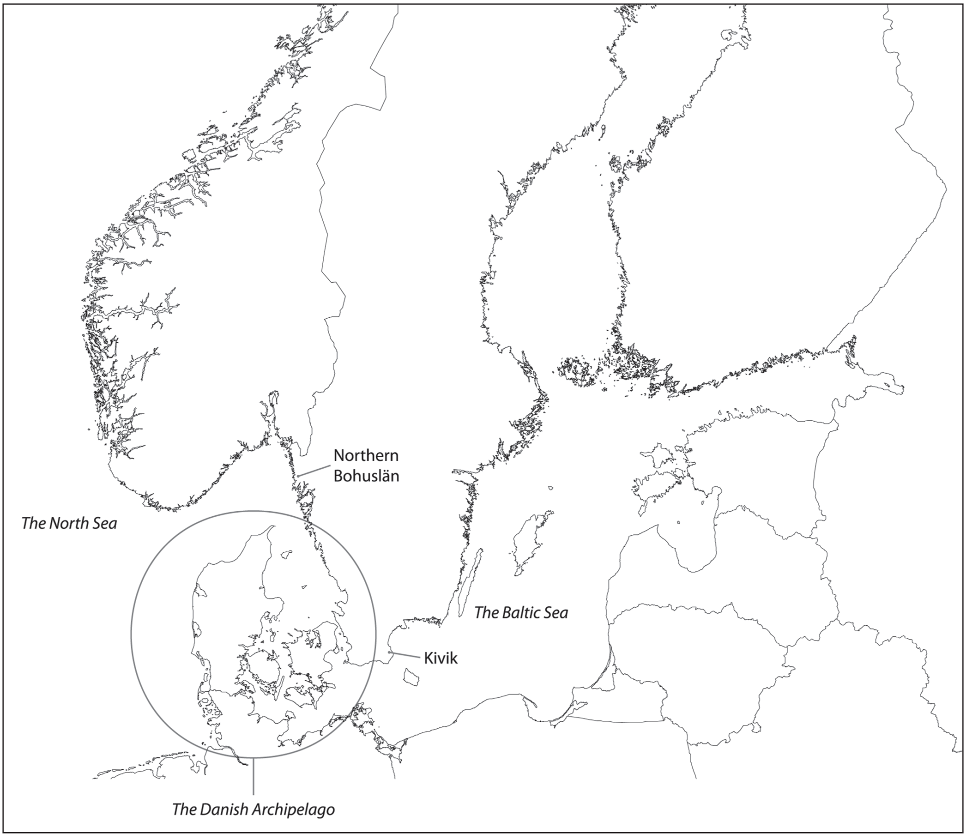

Figure 11.1 Scandinavia, with the three inter-regions indicated. Northern Bohuslän and Kivik are also indicated.

like a ship), many of them dating to the Late Bronze Age (Wigren 1987; Artelius 1996; Widholm 1998, 2007; Werner 2003; Nielsen 2005). In this region we also find rock carvings – ships are a dominating motif in many areas (Burenhult 1980; Coles 2000; Wahlgren 2002)

Generally, both ships on rock art panels and stone ships have a spatial connection to the sea (see Figure 11.2). This is true on a regional level (Artelius 1996; Widholm 1998; Coles 2000; Wahlgren 2002; Werner 2003), but it has also been demonstrated by studies of specific locales (Bradley & Widholm 2007). Moving beyond the coastal zone to the interior of south Sweden, ship symbolism is lacking (Skoglund 2006).

Richard Bradley has used the sizes of the ship settings in the Baltic to estimate the size of the crew, based on the assumption that the paddlers were placed at one-metre intervals. These numbers are compared with the number of crew associated with ships on rock carvings in Blekinge and Småland. The conclusion is that both stone ships and rock art ships seem to have generally numbered a crew that would be appropriate to run a ship. In fact it seems possible to distinguish – in both media – between boats with a smaller crew indicating transport vessels and boats with a larger crew indicating war canoes (Bradley 2008).

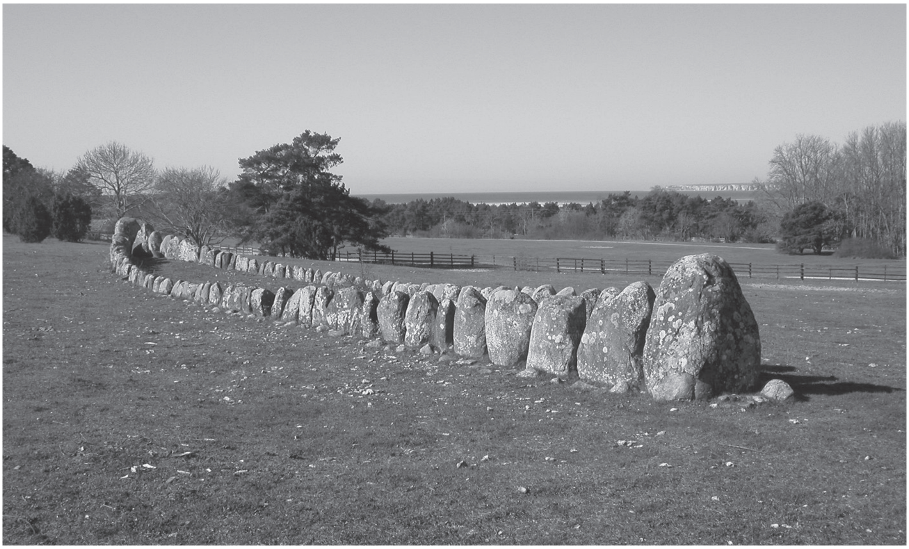

Figure 11.2 Ship setting at Gannarve, Fröjel parish, Gotland. Photograph by Peter Skoglund.

Recently the similarities between Bronze Age stone ships and preserved wooden ships from the Iron Age have been emphasized. It has been argued that there was a direct link between the Bronze Age and the Iron Age ship-building tradition. Wooden ships were models for the stone ships. The size and the length ratio of the stone ships indicate that plank-built vessels served as models and not dug-out canoes (Thirup Kastholm 2008).

The Danish archipelago

In Denmark and in Scania and Halland in present-day Sweden, stone ships occur less frequently, and when they do appear they are generally covered by a mound. While the Baltic stone ships fall into two groups, one larger and narrower, probably resembling war canoes, and one smaller and broader similar to merchant ships – only the latter group is evident in Denmark, Scania and Halland (Artelius 1996; Andersson 1999).

In this inter-region the number of rock carving ships is relatively low. Moreover, most of them were made in connection with death rituals and deposited in the grave together with the dead person (Glob 1969).

Ships also occur on metal items, namely razors. The razors were personal items; they occur as single items in connection to specific individuals in graves, but not in deposits or at settlements. Osteological analysis made on bone material from south Sweden demonstrates that razors were associated with men about the age of twenty or older (Arcini *et al.* 2007: 144).

From a study of decorated bronze items by Flemming Kaul (1998) it is clear that the ship played an important role in a myth explaining the voyage of the sun. The ships on metal razors do not occur in isolation but with other figures such as horses, birds, snakes and sun symbols. Each razor tells only a sequence of the myth, but the images on the razors overlap and by linking them together a narrative about the sun's daily journey can be reconstructed (Kaul 1998, 2004). The decorated metal items are most common in Denmark but they occasionally occur in Sweden and Norway. They date to the Late Bronze Age, 1100–500 BCE.

There are also some rare examples of items recently interpreted as miniature paddles, found in Late Bronze Age Danish graves. These symbolic paddles, dating to 1100–700 BCE, might indicate the social status of the dead as a person with special obligations aboard a ship (Haupt & Fenger 2003; Kaul 2005: 42).

The North Sea

In the North Sea area, from northern Bohuslän to the Tröndelag area, the situation is different. Generally there are no ship settings with the region of Jæren as an exception. Here, excavations have revealed ship settings covered by cairns, something that makes Jæren, in this respect, similar to Denmark, where we also find stone ships below monuments (Nordenborg Myhre 2004).

Rock art is well represented along the coastline and ships are the dominating motif. There is a strong spatial relationship between the shoreline and the placement of rock carvings. This has specifically been demonstrated in Ling's studies of the rock art in Bohuslän (Ling 2008), but a similar position of rock art is also evident in areas further to the north in present-day Norway (Mandt 1991; Wold 2002; Mandt & Lødøen 2005; Nordenborg Myhre 2004).

Ritualization

It seems possible to conclude that the frequent use of ships on rock carvings and as burial monuments in the Baltic and in the North Sea grew out of a ritualization of an everyday experience. These developments are likely to happen where people are dependent upon the sea to make their living. As pointed out by Ian McNiven, on the basis of studies of aboriginal people, to be dependent upon the sea is not only about subsistence, but goes hand in hand with the establishment of spiritual relationships between man and the sea (McNiven 2003, 2008).

Another example of this phenomenon is in southeast Asia and Melanesia. In this region the boat was not only a fundamental vehicle for transport but also played a significant role as a social and religious metaphor. For example, in the southeast Moluccas, villages were arranged around centrally placed stone enclosures shaped like boats and decorated with carved prows. The stone boats represent the community and its initial founding by the ancestors. In other communities real boats with wheels were used in rituals and ceremonies, and in some societies the hierarchy on board was mirrored in the organization of society (Ballard *et al.* 2003).

Christer Westerdahl (2006) has discussed the Scandinavian maritime folk belief as it is known from oral and written sources. He concludes that there was a strong opposition between land and sea. This was expressed in various rituals. In historical times, incarnations of land were taboo or forbidden to take on board. Meanwhile, maritime expressions, like the ship, gained a very strong symbolic value when used in rituals on land. An interesting consequence of this perspective is that maritime ritual expressions might be spatially restricted to the sea and the immediate shoreline, and that certain restrictions governed their use on land (Westerdahl 2006). This perspective might help us to further understand the various uses of ship symbolism in the three inter-regions discussed above. Generally there seems to be a spatial connection between rock carvings and the sea in the Baltic and the North Sea. The carvings occur in the coastal zone in close contact to the Bronze Age shoreline as if they were used primarily in rituals connected to a maritime context.

The situation is similar for the stone ships along the Baltic coast. We know that these monuments were constructed as parts of a burial rite. However, they were depictions of different kinds of real ships; they were often exposed in the landscape, and positioned in sight of the sea, or in walking distance from the sea.

In the Danish archipelago the situation is different. The razors on which most ships occur were used differently to the rock art ships and stone ships in the areas further to the north. The ships on the bronzes comprise realistically (as well as non-realistically) dimensioned ships (Bradley 2008). The latter, judging from the many people aboard, cannot have real ships as prototypes. Moreover, the razors and other bronze items were not used in a maritime context, but they were personal items connected to either initiation rites or burial rites. When ending their life-cycle they were deposited in graves and hidden from the public (Kaul 1998).

The stone ships and rock-art ships, which in this area occur in comparatively low numbers, were treated in a similar way. They can be associated with burial rites. They were withdrawn from any maritime context when they were deposited in mounds as part of burial rites (Artelius 1996; Andersson 1999). Therefore in this area a connection between ship symbolism and a maritime context is less evident.

These different patterns were probably related to different ways of making a living, although it is difficult to explore this issue further because quantitative data concerning Bronze Age fishing are too limited to allow definite conclusions (Berntsson 2005: 248–9). However, judging from the spatial distribution, the ship symbolism in the Baltic and in the North Sea was linked to the praxis of fishing and sea voyages. This was an everyday experience of those people inhabiting the coastlines of present-day Sweden and Norway. Conversely, the ship in present-day Denmark was taken out of the maritime context and used in rites and myths that had little or no connection to a maritime setting. Hypothetically, this in turn goes back to a way of living where fishing was relatively less important than in the areas further to the north.

If this conclusion is correct, there were vital differences in the use of ship symbolism in the three discussed regions. This leads to the assumption that the areas in between the regions (i.e. eastern Scania and northern Bohuslän) were regions with a special character: here people from two different inter-regions met in what might be labelled a third space. Here different ideas and traditions confronted each other and new material and ideological expressions came to light.

The very special geographical positions of these two regions might shed some light over the fact that we here find material cultural expressions that are unique not only in a Scandinavian, but also in a north European perspective, such as the density and variety of rock art motifs in northern Bohuslän and the Kivik grave with its famous depicted slabs in eastern Scania.

Eastern Scania and northern Bohuslän as nodal points

The density and variety of rock art motifs in northern Bohuslän is unique, causing this area to be included on UNESCO's World Heritage List. The rock art panels comprise a broad spectrum of motifs such as ships, people, footprints, acrobats, warriors, cattle, trees and people ploughing the earth. However, quantitatively ships totally dominate the picture (see Figure 11.3; Baltzer 1881–1908; Almgren 1927; Nordbladh 1980; Malmer 1981; Bertilsson 1987; Fredell 2003; Bengtsson 2004; Coles 2005; Ling 2008).

What can be noted is that the motifs consist of two kinds of scenes. There are scenes that are intimately connected to a local landscape use, depicting trees, herders, cattle and people ploughing the fields; on the other hand we also find symbols such as swords, helmets, axes and bows (Nordbladh 1989: 327). Ulf Bertilsson has argued that many of the fighting scenes are inspired by Urnfield material culture since swords with a winged shape occur as well as boss ornamented shields (Bertilsson 1987: 186).

Another observation made by Flemming Kaul is that there are ships among the carvings in northern Bohuslän that are inspired by ships on metal items and not by real wooden ships. There are a few examples of folded ships, the counterparts of which are to be seen on metal razors where the ship depiction starts at one side of the razor and continues on the other side (see Figure 11.4). According to Kaul the person who created these ships must either have held a model in bronze in his hand or at least have heard about such an object and known what it ought to look like (Kaul 1998: 100). In northern Bohuslän there are with one exception no metal razors; razors with folded ships were made in Jutland in Montelius period IV (1100–900 BCE), from where they spread to adjoining areas of the Danish archipelago in Montelius period V (900–700 BCE).

These circumstances indicate that the high density of rock art in northern Bohuslän cannot only be understood in a local perspective. Northern Bohuslän seems to be a region where influences from different regions were mixed together.

The position of Bohuslän – strategically situated between the plains that constituted medieval Denmark on the one side, and the coastal and rocky areas of Norway on the other side – is worth considering. The use of the ship symbol in northern Bohuslän might have been influenced to a certain degree by people coming from the Danish

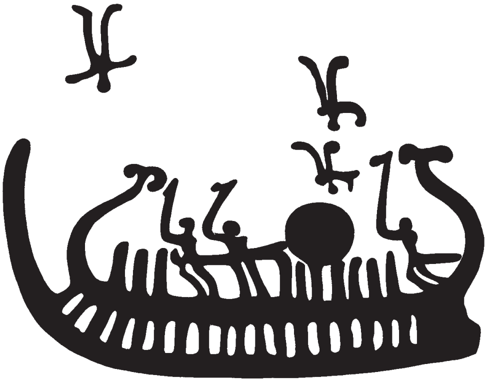

Figure 11.3 Ship from Tossene parish, northern Bohuslän (from Skoglund 2005: 165).

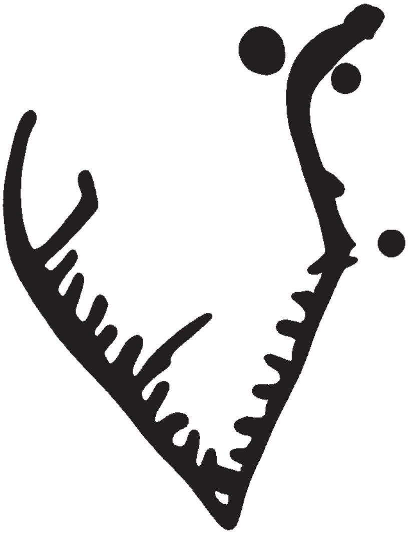

Figure 11.4 Rock art ship from Litsleby, Tanum Bohuslän. The ship is folded in a way that is characteristic of folded ship depictions on razors from the Late Bronze Age (from Skoglund 2005: 167).

archipelago, bringing with them ideas and knowledge that were reused and recontextualized in a specific ritual maritime context that did not exist in the areas further to the south.

In this respect eastern Scania is a parallel – strategically situated between the Danish archipelago and the Baltic. In contrast to the Baltic, we do not find a very high density of rock carving sites, but we do find certain locales that stand out as unique. These are places like Frännarp with a row of carts as dominating motif (Coles 2002), the Simris area with a few sites totally dominated by axes (Althin 1945; Coles 1999) and finally the very special carvings inside the Kivik cairn.

The spectacular Kivik cairn measures seventy-five metres in diameter and is dated to the Early Bronze Age, c. 1300 BCE (Nilsson 1862–64: 1–36; Almgren 1927: 170ff.; Nordén 1933; Randsborg 1993: 107ff., 119; Verlaeckt 1993: 26f.; Kristiansen & Larsson 2005: 189ff.; Goldhahn 2005: 223ff.; Skoglund 2005: 119ff.). The size of the monument is impressive and extraordinary in a Scandinavian perspective, but what makes the grave unique is the composition of the motifs on the slabs (see Figure 11.5). Sections 7 and 8 depict scenes from the actual death rituals that have no counterpart in Scandinavia. Among the pictures on these two slabs there are a chariot, processions and people blowing lures. On the other slabs, sections 1–6, we see three ships, four horses, four wheel crosses, two mushroom-shaped symbols and, finally, in close relation to each other two axes, two spears (?) and an image that has been interpreted as a hat.

A possible explanation for the uniqueness of the images on the decorated slabs is that they are the result of negotiations and exchanges of ideas. At this place people from different regions and inter-regions came together and formed a new material expression, which partly came out of their specific and different local experiences, and partly was a result of people with different ideas coming together (Skoglund 2005: 123ff.).

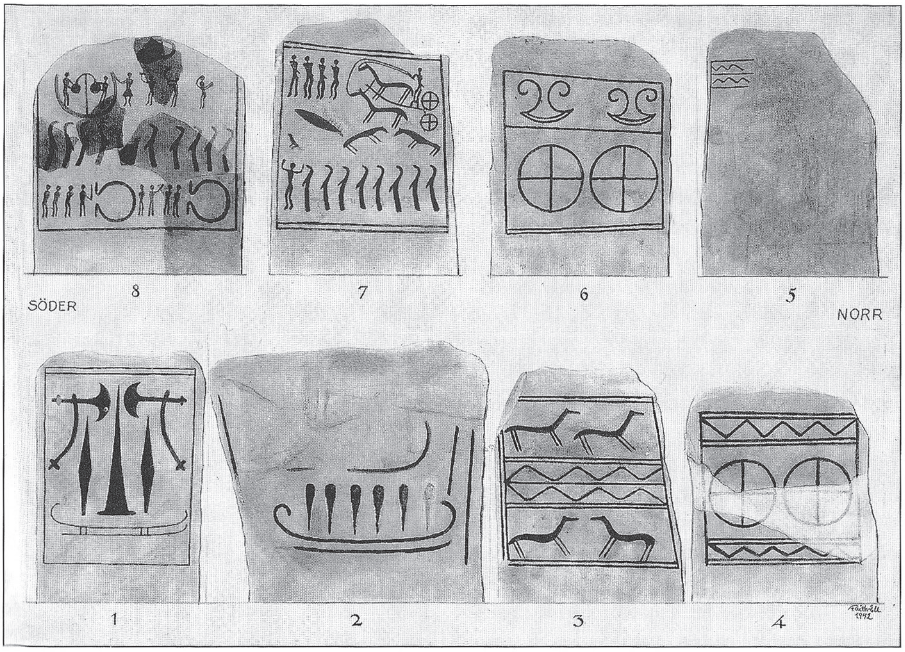

Figure 11.5 The Kivik carvings (from Goldhahn 1999: 159).

Discussion

In this chapter I have discussed major differences in the use of ship symbolism in Scandinavia. I have argued that references to ships on rock carvings, bronzes and in the shape of monumental stone ships were used differently in the Danish archipelago, the North Sea and in the Baltic.

The major differences were between the Danish archipelago on the one hand and the North Sea and the Baltic on the other. In the Danish archipelago depictions of ships and monumental stone ships were taken away from the maritime context and used in rituals played out at a distance from the sea. The symbolism connected to ships thus took on new meanings in a terrestrial setting. By analogy with documented historical circumstances (Westerdahl 2006), we could argue that the removal of the ship from the maritime setting strengthened the power of the symbol and made it possible to add new layers of meaning to the ship symbolism.

In the areas further to the north, in the North Sea and in the Baltic, ship symbolism was essentially played out in a maritime context. The spatial distribution of rock carving sites supports the idea that making ships on rock was done in connection with maritime activities such as fishing and sea voyages.

A similar perspective could also be applied to the ship settings that frequently occur in the Baltic. The stone ships in this area seem to reproduce different kinds of real wood ships, and they are visible in the landscape close to the sea.

It should be noted that the picture painted here is a general one, and if studying specific regions in detail, a more complicated picture emerges. For example, along the

Norwegian coastline certain regions stand out as quite different from neighbouring areas; in some respects they resemble the situation further to the south in the Danish archipelago (Kaul 1998: 80–4). Thus, there were no definite borders between the three inter-regions discussed in this chapter – they evidently did influence each other.

This kind of influence between different regions is very marked in the bordering zones between the inter-regions (i.e. northern Bohuslän and eastern Scania). Here we find material expressions that seem to be hybridizations between different ideas and customs. To extend the argument, a distinction between praxis and content is helpful.

The many and extraordinary rock carving sites of northern Bohuslän are the outcome of a maritime praxis. In this region, as well as in regions further to the north, rock art was depicted in huge numbers in close connection to the Bronze Age shoreline. However, in the specific area of northern Bohuslän, the very content of the rock art cannot be understood without considering influences from the southern parts of Scandinavia. Even though ships dominate, we also find metal items like razors, imported swords and helmets that are not known in the archaeological record from this area (Bertilsson 1987; Skoglund 2005).

A similar perspective can be used to understand the Kivik grave in eastern Scania. The cairn is impressive and over-dimensioned, but it is situated in a Baltic tradition of building monumental burial cairns. However, the symbols depicted on the slabs inside the cairn cannot be understood in an isolated Baltic context. The presumed hat, the chariot and some of the other symbols bear references to a north European elite context. In the creative border zone, between the Danish archipelago on the one side and the Baltic on the other, it became possible to use symbols in a new way and to create compositions that have not been played out in a similar way at any other known locale.

In conclusion, social and political borders are important if we are to understand different distribution patterns of Bronze Age material expressions. Power was geographically structured – space delimited the ways ideas and traditions were played out. Creative zones, where new hybrid expressions were created, emerged in the border zones between different social and political inter-regions.

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12

The origin of a Bronze Age in Norway: structure, regional process and localized history

Christopher Prescott

The Late Neolithic and Early Bronze Ages in most of southern Norway represent a socio-cultural order that radically differs from that of the preceding periods (Prescott & Walderhaug 1995; Prescott 1996). The transition to the Late Neolithic, in 2400–2350 BCE, is marked by dramatic changes in production, economy, settlement, social relations, material culture and technology – virtually every conceivable facet of the institutional and ideological constitution of society. This shift, probably among the most dramatic in the region's history, raises issues concerning the institution of a political economy, hierarchical ideologies and hereditary political power. Viewing these institutions in a historical perspective it becomes necessary to identify the context of transformation – when did the historical trajectory change course, and how? These general-level questions engage fundamental and classic archaeological research problems, often studied as discrete themes, concerning the establishment of farm institutions, metallurgy and maritime practices, as well as novel forms of rituality, cosmology, exchange and scales of interaction.

Discussions concerning the scenario outlined above in the late prehistory of Norway – the late part of the "Neolithic" and the Bronze Age – are often structured around dichotomous positions: structure versus history, local evolution versus regionally/continentally determined historical developments, centre versus periphery, and so on. The polarized nature of this basic explanatory repertoire has perhaps reached the limits of its potential for resolving problems and generating knowledge. Therefore, an essential analytical element in Late Neolithic (LN) and Bronze Age (BA) research, as well as a powerful driving force in the prehistoric societies that are studied, is to "replace dualism with duality" (Giddens 1982: 36–7), activating the dialectic nature of local structural versus historical forces, continental versus local scales, and environmental versus socio-cultural factors. It should be a goal to move from local versions of general evolutionary typologies, blueprint application of continental patterns or descriptive and de-contextualized local narrative to developing a genuinely responsive historical narrative – in specific time and space contexts (Glørstad & Prescott 2009). Needless to say, developing a history of the earliest BA will be a long-term undertaking.

Most BA studies are written from the perspective of the regions that are defined as central by contemporary societies – regions in southern Scandinavia with their accumulations of materials and sites that practically define the sub-discipline of BA studies: burial monuments, rock art, sacrificial depots and metal (tools, weapons and adornments). A number of studies have dealt with more peripheral materials (e.g. lithics), sites (e.g. rock-shelters) and places (e.g. in conspicuously non-agrarian landscapes) on the Scandinavian Peninsula, but these studies have seldom analysed and interpreted such finds and data in an explicitly BA context (both in terms of BA society and research traditions engaged in the BA), typically leaning towards a local evolutionary Stone Age framework or discarding an explicit cultural or historical context altogether.

The present chapter is based on perspectives influenced by the author's experiences in regions peripheral to LN and BA studies in southerly Norway (see Figure 12.1), while adopting an explicit BA research context. The broad regional and continental historical patterns of the BA are reflected in even remote highlands of Norway, and as such these "peripheral research experiences" emphasize the deep structural and historical forces involved in LN and BA history. These forces are expressed on variable spatial and temporal scales: local practices and agendas, regional patterns and politics, and continental streams (Prescott & Walderhaug 1995; Prescott 2005 in reference to Barth 1983).

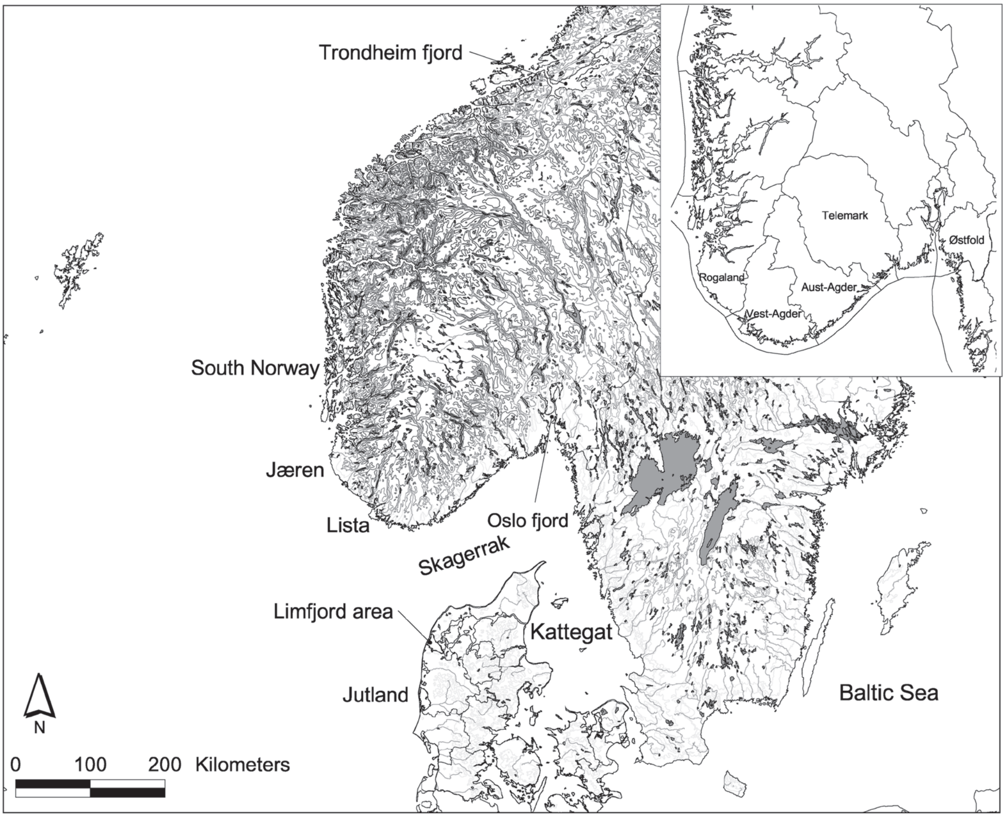

Figure 12.1 Map of Norway, Skagerrak and Jutland, the region discussed in Chapter 12 (map by H. Glørstad).

This perspective supports realigning a number of analytical premises. Though most Neolithic and BA studies of Norwegian conditions point to developments and changes around 2400–350 BCE, they are generally based on an evolutionary premise, emphasizing (very) long-term process, structure and continuity within a local context. In this regard, the common account is a *Neolithic* narrative, explaining and emphasizing slowly developing agriculture as the most important source of dynamic change in prehistory, and the pivotal analytical indicator for contemporary archaeological studies. This narrative is problematic in that despite virtually universal application, it tends to remain local and portrays a historical outcome that is a given evolutionary result. In a Norwegian context it furthers and is based on a national ideology that sees regions of present-day Norway as only marginally conditioned by broader northern European developments, influence and history (e.g. Brøgger 1925, discussed in Prescott 1994). This concept maintains a mechanical determinism that refers to raw materials (lithics versus metals), production (hunting/gathering versus agriculture) and settlement (mobile versus stationary), rooted in perceptions of Norway as a unique environment. The ensuing decontextualization from economic models, social structure, and historical and cultural context generates severe limitations in understanding this period's history in the region. For example, concepts of "cultural dualism", asserting ideas of relict, virtually ahistorical traditions and cultures living side by side with cultures in tune with the typologically accepted sequence of southern Scandinavia, have been empirically and theoretically refuted. Still, concepts of "cultural dualism" explicitly and implicitly live on as analytical premises. This situation is probably due in part to fundamental correspondence with contemporary identities in Scandinavian society (both in regions that regard themselves as central and those that revel in their peripheral identities) and political trends within the archaeological communities since the 1970s. This is, for example, illustrated in the frontlines drawn in connection with referendums since 1972 over Norwegian EU membership. These pretty much echo fundamental national positions in archaeology since the 1920's; Norway represented as unique, versus Norway as an integral part of Europe (see Prescott 1994; Eikrem 2005).

The present chapter reasserts the argument for a dramatic change in 2400–2350 BCE, around the transition to the period of the Late Neolithic I (LN I), and that this transition is the basis for a historical trajectory that cuts across all older traditions in Norway and in Scandinavia (see Prescott & Walderhaug 1995; Prescott 1996; Prieto-Martìnez 2008, 2009; Glørstad 2011; Melheim 2011). Despite common archaeological terminology that so strongly structures interpretation (for example Late *Neolithic* as a terminal Stone Age period), it is argued that the LN I is the history of the initiation of the BA. As of the LN, a new historical continuity and structural logic are established, and these continuously evolve into the mid-pre-Roman Iron Age (Prescott 2005: 132), and are also the historical foundation of the ensuing Iron Age societies.

In terms of contemporary research strategies, the discussion thus concerns evaluating empirical expressions, but also weighing the internal emphasis between structure and history (Glørstad and Prescott 2009), whether generating a general narrative of structurally driven process or a narrative of a specific historical process and event. In terms of history in prehistory, the discussion concerns the variable structural conditions for historical process before and after the LN transition (Glørstad & Prescott 2009, in reference to Lévi-Strauss's contention that Neolithic society is "cold" – societies where historical forces are consistently countered; Lévi-Strauss 1966). This discussion also encompasses problems of what might initially seem to represent a question of scale (European, Scandinavian, Norwegian, local), but is also related to analytical perspective: narratives of local, autonomously driven development versus history as the outcome of forces and events on highly variable geographical scales – from continental to local (Kristiansen & Larsson 2005; Skoglund 2005). To this end, though the chronological focus is the LN, the following narrative inevitably looks back in time to the Early and Middle Neolithic A (MNA; c. 3950–2800 BCE), the Middle Neolithic B (MNB; c. 2800–2350 BCE), and especially the MNB3, Upper Grave phase c. 2430–2350 BCE). The geographic focus is southwest and western Norway, though southern Scandinavian patterns provide the contextual and historical backdrop, and reference to eastern Norway provides a comparative element.

A Neolithic precursor?

Inherent to rearguing the historical significance of the LN, the development of farming institutions and the rise of BA societies in Norway is understanding developments in the preceding Early Neolithic (EN) and MN A and B periods. These periods are concurrent with the Funnel Beaker (TRB, from German *Trichterbecherkultur*; EN and MNA) and Corded Ware (MNB) cultures of southerly Scandinavia. Two areas in southernmost Norway have yielded data that with a degree of certainty suggest agro-pastoral production: the region around the Oslo Fjord and Lista/Jæren in southwest Norway (Prøsch Danielsen 1996; Østmo 1998; Høgestøl & Prøsch-Danielsen 2006; Solberg 2009). Though evidence remains patchy, developments here, particularly around the Oslo fjord, are probably related to the wider TRB (Østmo 1998). These developments probably include a Neolithic-style economy (i.e. a small-scale agro-pastoral production). Outside of these areas there are at best ambiguous indications of agro-pastoral production or consumption of agricultural produce (Prescott 1996). Though some material elements associated with Neolithic cultures are recovered, such as basaltic and flint axes/adzes, and small occurrences of pottery, the predominant socio-cultural formation throughout most of Norway can be summed up as well-adapted hunter–fisher societies that actively chose *not* to adopt agriculture or Neolithic culture. As far as the more authentic Neolithic regions around the Oslo fjord and in southwest Norway are concerned, agricultural production does not seem to have been an evolutionary precursor, in any direct sense, for later developments. Indeed, except for perhaps the Lista region, the continuity of any agricultural practices through the EN and MN is questionable. The strong research emphasis on "Neolithic agricultural" is probably an analytical dead end in terms of understanding long-term historical trajectories in Norway; when agro-pastoral practices were broadly established as the economically structuring mode of production, around the transition to the LN, it was part of an entirely different history, and one of a suite of cultural traits more complex and dynamic than the small scale of any potential or hypothetical agro-pastoral production in the EN and MN.

The dramatic transformations of ideology, economy and social organization that were such marked features of historical developments as of the MNB–LN I transition (2400–2350 BCE) have been hypothesized on several occasions to have roots in the preceding MNB (Prescott 1996: 85; Aksdal 2000: 118). Turning to the MNB (the MNB3, the final century, is of particular importance), the record is ambiguous and fragmented. There are several interesting features, such as the occurrence in eastern Norway of a few graves of the Battle Axe/Corded Ware culture (Hinsch 1956; Hansen 2005). A few radiocarbon dates of agro-pastoral indicators, without other indications of cultural associations, potentially stretch back into the final MNB – or more precisely have standard deviations that span the MNB–LN border. For example, recently four sites in the county of Sogn and Fjordane, western Norway are interpreted to be more or less related to agro-pastorally related clearance. The radiocarbon data has been asserted to substantiate an MNB date, based on single samples from each site (Olsen 2004: 105ff., based on personal communication from A. B. Olsen; also Olsen 2009). Apart from the methodological issues involved in single radiocarbon dates to assess age without stratigraphical or typological corroboration, the dates broadly span the general MNB–LN I transition and/or are based on indirect associations with pollen data interpreted as a result of agro-pastoral activities. They do not substantiate an MNB date, and within the broader historical context are probably best regarded as indicative of the process of transition around the MNB3–LN or early LN I. A single, fourth date is more skewed towards MNB values, but is contradicted by a LN I date from the same site. The dated feature here is a charcoal-rich layer with minor occurrences of barley pollen, interpreted as evidence of agricultural clearance. Though empirically inconclusive, these data are interesting when interpreted against the backdrop of broader western Scandinavian developments – the Bell Beaker culture (BBC) in northern Jutland potentially starts as early as 2600–2500 BCE (Vandkilde 2001, 2005; Prieto-Martínez 2008, 2009, with discussion). The few potentially early dates, like those from Sogn, though inconclusive, raise the issue of what happened just before the transition to the LN. Are the radiocarbon dates an expression of statistical and methodological variance associated with radiocarbon in general and methodological limitations in particular? Or, since the dates coincide with BBC influence in western Scandinavia, are they an expression of initial BBC impact? All in all, the proposed MNB dates offer little resolution of the problems, but underscore the necessity of substantial, high-resolution Norwegian data from around 2450–2350 BCE.

In summary, the foundation for this chapter is that there is ample reason to park narratives of local evolution and agricultural experimentation in the EN and MN, leading to a "breakthrough for early agriculture" in the LN and EBA, followed by a tentative establishment of farms in the LBA and final agricultural entrenchment in the Early Iron Age. Instead, this chapter emphasizes that throughout the EN and MNA most of Norway is settled by well-adapted hunter–gatherer societies. The economy in these societies was based on fishing, hunting and gathering throughout the region, though pockets of TRB-style agriculturists were probably found in the Oslo fjord region and southwest Norway. In the final part of the MNB there are inconclusive data, but strong logical arguments for the start of the economic and social transformations to come with the transition to the LN I.

The Late Neolithic transformation

The LN transformation was swift, and affected most of southerly and coastal Norway. This transformation is not merely a question of unequivocal archaeological proof of

Table 12.1 Published indications of agriculture dated to the early Late Neolithic I, and possibly Middle Neolithic B3.

Evidence	Location	Age, uncalibrated BP or period designation	Reference
Fields and ardmarks	Hjelle, Sogn, Fjordane	3650, 3690, 3760 BP	Soltvedt 2000
	Håbakken, Rogaland	LN I	Juhl 2002
	Saunes, Dalteigane, Sogn, Fjordane, Rabbane, Hornnes, Hordaland	LN I	Diinhoff 1999: 6
	Svinesund, Torpum 9a, Østfold	3635 BP	Rønne 2003:78
Possible cultivation layers	7 sites in Sogn, Fjordane, Sunnmøre	3970–690 BP	Olsen 2004, Olsen 2009
Cereals – directly dated	Hjelle, Sogn, Fjordane	3760 BP	Soltvedt 2000: 3
	Austbø, Rogaland	3805 BP	Bakkevig *et al*. 2002
	Svinesund, Torpum 9a, Østfold	3630 BP	Glørstad 2003: 147
Cereals – in layers	Skrivarhelleren, Sogn, Fjordane	3610 BP	Soltvedt 2000: 53
Pollen	Region B Jæren, Rogaland	3800 BP	Prøsch-Danielsen & Simonsen 2000

agriculture or stockholding (see Tables 12.1 and 12.2), an introduction of agricultural practices or a culmination of a Neolithization process. Around 2400–2350 BCE a far more comprehensive package of new elements in the material culture is found, while older practices disappear (see Table 12.3). Lithic technology is characterized by bifacial flaking, while the lithic forms echo copper alloy counterparts in continental Europe. The barbed-and-tanged bifaces, the bell beaker from Slettabø, a wrist guard from Rugland in Rogaland and burials in the Ruskeneset rock-shelter are elements that demonstrate a BBC background (Skjølsvold 1977; Myhre 1979; Prescott & Walderhaug

Table 12.2 Faunal evidence of domesticated species from the earliest Late Neolithic I.

Evidence	Location	Date	Reference
Cattle bones – dated by association	Slettabø, Rogaland	Late MNB–LN I	Skjølsvold 1977: 69
Cattle, sheep and goat bones – dated by radiocarbon & association	Skrivarhelleren, Sogn, Fjordane	LN I	Prescott 1995: 100
Cattle tooth – radiocarbon	Hammersvolden, North Trøndelag	MNB3–LN1 (2460–2290 BCE)	Asprem 2009: 7
Sheep faeces	17 Budalen, Hordaland	3700 uncalibrated BP	Nærøy 1994: 148 Soltvedt 1994, 223f

Table 12.3 Late Neolithic technology and material culture.

Artefact	Location	Date	Reference
Bifacial points	Slettabø, Rogaland	Bell Beaker type	Myhre 1979; Skjølsvold 1977
	Vikadalen 32, Sogn, Fjordane	3760, 3690 BP	Bjørgo *et al* 1992: 112
Bifacial points, barbed-and-tanged	Southwest Norway, along western coast	MNB3?/LN I	Holberg 2000; Myhre 1979; Østmo 2008
Bell beakers	Slettabø, Rogaland	Late MNB/LN I	Skjølsvold 1977: 155, 364
Wrist guard	Rugland, Rogaland	LN I	Holberg 2000
Decorated grave slabs	Mjeltehaugen, Sunnmøre	LN I?	Mandt 1983

1995; Holberg 2000; Østmo 2008; Melheim 2011). Likewise, the decorations on the stone slabs in the Mjeltehaugen grave monument (Mandt 1983) may depict early BBC-style petroglyphs, and are best studied in reference to BBC decorative schemes and Atlantic BBC cist carvings (Prieto-Martinez 2008, 2011). A date to the Early BA II or III has been suggested (Linge 2007: 82ff.) and is a valid proposal, albeit if the grounds for the proposal are circumstantial and tenuous. Though extensive and independent chronological evidence is lacking, an LN date is highly credible (Carrasco 2009).

Some of the finds from the Skrivarhelleren rock-shelter in Årdal, in Sogn, like small bone, shell and slate ornaments, beads, a spatula and a small plug interpreted as a lip stud, echo ornaments from Bell Beaker burials in Great Britain, as do traces of geometric decoration (Prescott 1991; Melheim 2011), suggesting BBC influences along the coast and into the interior. Occurrences of early copper/copper alloys and metallurgical contexts stem from the LN, and are tentatively linked to BBC influence (Melheim 2011). The great number of type 1 flint daggers, produced in Jutland but common in western Norway (Scheen 1979; Apel 2001), underline interactions with Beaker regions of northern Jutland (see Figure 12.2). New land rights and changed social relationships between people are indicated by the two-aisled longhouses (see Table 12.4) that here, as elsewhere in Scandinavia (based on data assembled by Artursson 2009), turn up in this context. The longhouses demonstrate permanent settlement, investments in developing land for agro-pastoral purposes, exclusive rights of access and probably an extended household-base of labour. The longhouses are situated in agro-pastoral land

Table 12.4 Late Neolithic I longhouses.

Dual-aisled longhouses, location	Date, uncalibrated BP or period designation	References
Svinesund, Østfold	3790 BP	Rønne 2003: 217
Arctanderjordet, Lista, Vest-Agder	LN I/II	Valum 2009
Voll, Rogaland	3665 BP	Mydland & Soltvedt 1995: 130
Kvåle, Rogaland	LN	Myhre 2002: 45
Sande, Sunnmøre	LN I to EBAI	Johnson & Prescott 1993

(if of variable quality), and the combined evidence of settlement and agro-pastoral production demonstrates that the social and economic institution of the farm is established at this time. As such, new conditions of social interaction and new social relations (e.g. a degree of hierarchy) were established – everyday life was drastically changed. A number of the elements are symbolic of a masculine, archer–warrior ideal – the Indo-European ideals of the BBC, as the weapons and ensuing rock art symbolically express – and as such represent an ideology very different from that of the preceding hunter-gatherer societies, or indeed any potential TRB-style agricultural societies. The important feature here, in Norway as elsewhere in Scandinavia (Prieto-Martinéz 2009: 98), is that no matter what the economic base of the society before the LN transition, the profound shift in economy, society, symbolism, technology and ideology (mentality, material and practice) cuts through variable older traditions and establishes a new, Scandinavian socio-cultural form sparked by and related to broader BBC and evolving BA societies of northern Europe.

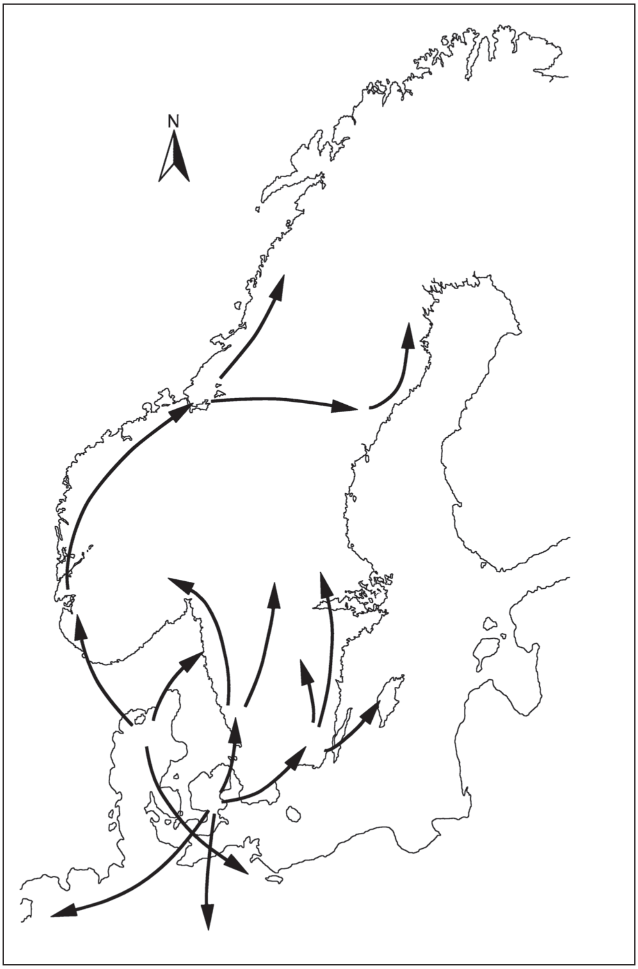

Figure 12.2 Circulation patterns for type 1 flint daggers in the Late Neolithic I (from Apel 2001: 307).

Connections

In Norway, the geography of external influences in the EN and MN A/B is primarily an eastern Norwegian phenomenon – first through the TRB culture around the Oslo fjord, later represented by the sparse occurrence of Battle Axe culture graves and basaltic battle axes. Around the transition to the LN I there is a shift in geographical focus of interaction from eastern to southwestern and western Norway (Prescott & Walderhaug 1995: 262ff.; Østmo 2008: 267ff.; Glørstad 2011). Though some elements were conceivably initiated in the MNB3, developments in western Norway are hardly rooted in a local development. Numerous cultural features demonstrate external contacts – the characteristic type 1 flint dagger (Lomborg 1973; Scheen 1979; Apel 2001) is especially symbolic of the cultural content; Danish flint was used in stylistic expressions, clearly in reference to western European metal weapons. The daggers are material expressions of robust networks in this part of northern Europe, and serve to map the paths of dissemination of the Nordic Culture (see Figure 12.2), demonstrating the tight bonds between southwest Norway and northern Jutland (Sarauw 2008: 37). In diachronic terms there has been a transformation of spheres of interaction and identity (*sensu* Barth 1969) from the EN/MN, at which time there was intermittent *over*-the-border interaction in the Scandinavian region, to the LN I transition, when interaction was *within* the regional common Nordic sphere. The dagger distributions represent the materialization of sustained partnerships in regional interaction, probably involving some degree of elite alliances and expressing concepts of mythological or real genealogical ties.

The decisive key to resolving the processes, forces and histories of what happened at this time, as well as elements of why things happened, is probably largely external to southwest Norway. Western Scandinavian geography and LN I dagger distributions show that the most dominant and determinative source of external influence is found in northern Jutland (see Figures 12.2 and 12.3). In recent years, important historical developments that are highly relevant for southwest Norway have been documented in Jutland, and this can be summed up as the establishment of the northern European BBC here. As the evidence stands today, the BBC seems to be linked to the major transformation that quickly leads to the establishment of the Nordic LN (based on data in Vandkilde 2001, 2005; Sarauw 2008; Prieto-Martínez 2009; Vander Linden 2007), encompassing most of the elements found in Norway described above. The BBC is also characterized by another feature: the initial establishment of metallurgical technology and metal forms as the dominant stylistic influence on objects in other materials.

The early Beaker connection is illustrated by an imported bell beaker found at Slettabø in Rogaland, along with barbed-and-tanged bifacial points and cattle bones (Skjølsvold 1977; Myhre 1979; Prescott & Walderhaug 1995; Holberg 2000; Østmo 2008). As the chronological data (radiocarbon and typology) now stand, the transformation of society, ideology and economy in Norway happened rapidly – conceivably in the course of a generation. Geographical features and a concentration of relevant early typological elements (the bell beaker, tanged-and-barbed bifaces, wrist guard) suggest that the process was initiated in southwest Norway, in Lista and southern Rogaland. The problems concerning chronologic resolution of the BBC-influenced new elements found throughout southerly Norway serve to demonstrate that the socio-cultural package was rapidly spread along the coast and inland of southern Norway. This process is a northerly example of the western European Bell Beaker puzzle, and here as in other

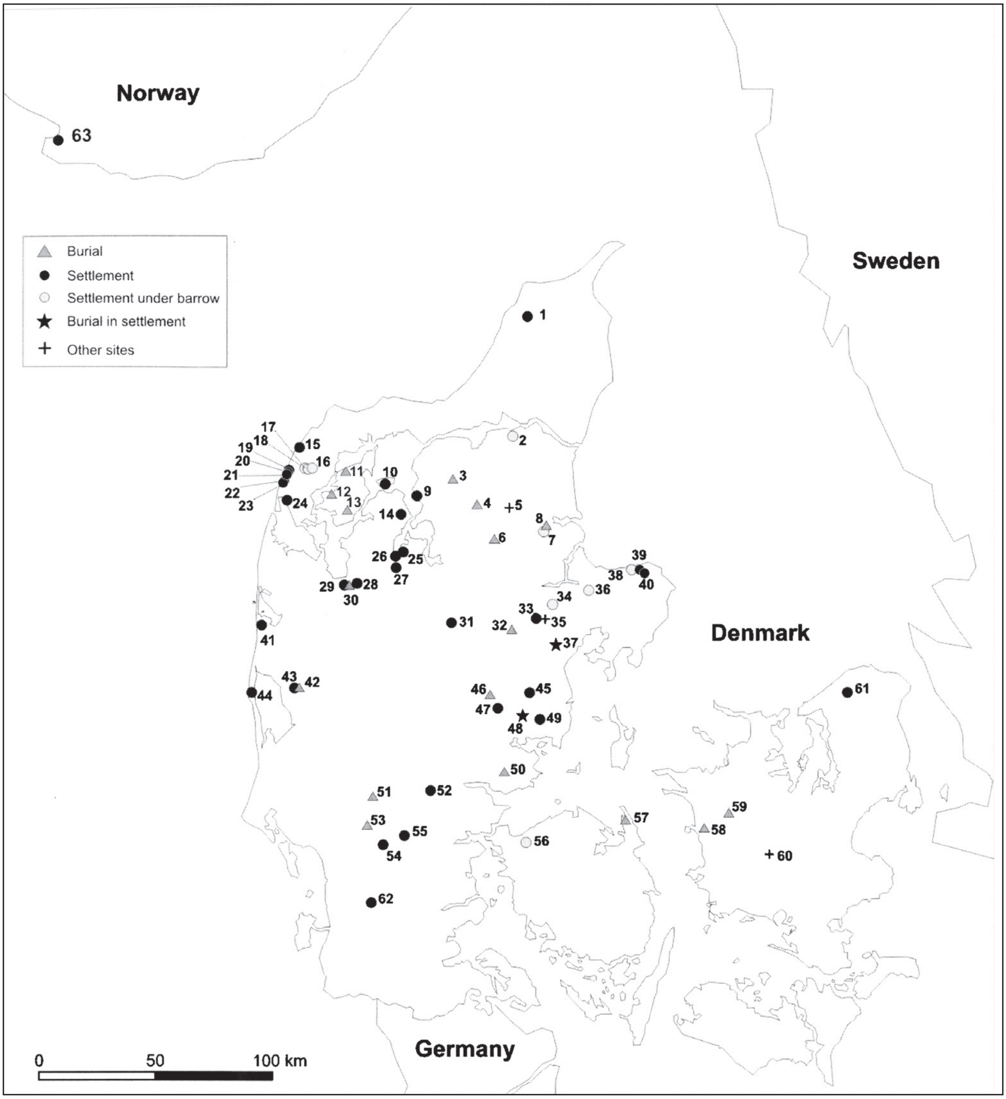
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Figure 12.3 Distribution of sites with bell beakers in Denmark and Norway. Slettabø is number 63, and is located more northwest than indicated on map (from Prieto-Martínez 2008: 118).

places the question arises: how did the BBC elements, and the LN I culture derived from the BBC, come to be rapidly spread over such great distances – a thousand kilometres along the coast – through such diverse environments?

A central issue, sometimes only implicitly debated, concerning the western European BBC has long been migration versus various degrees of local development. At stake are methodological issues (how to interpret and explain change), empirical issues (which elements in the archaeological record are emphasized, how they are dated), theoretical issues and research-historical questions (how certain modes of explanation attain pre-eminence over others, how the hierarchy of accepted explanatory models shifts). An important issue in this regard concerns models of migration. Archaeology has traditionally applied a cultural historical model of migration, or used this concept of migration to discredit migration as an explanatory factor, even in its contemporary guise (see Kristiansen 1991, with ensuing discussion). Culture-historical archaeology routinely argued large-scale population movement and replacement – pretty much modelled on experiences from recent history. However, migration is also a major concern in contemporary geography and other social sciences (Manning 2005), and this has slowly influenced archaeology (systematically argued in Anthony 1990, 1992; also Burmeister 2000). Concurrently, methods from chemistry and molecular biology have produced data that strongly support concepts of migration in the BBC context (Price *et al.* 1998, 2004; Pearson *et al.* 2007: 635-6), as well as tentative data concerning the Nordic Neolithic (Malmström *et al.* 2009). In David Anthony's models, migration is a common and complex social practice, conditioned by predictable social, economic, technological and ideological parameters, and following generalized patterns. Migration is also a vehicle of societal and cultural change. It should be regarded as an ongoing, bilateral process that rests on or activates other social institutions (marriage, alliance, genealogy and ideology), and leads not only to an initial episode, but also mechanisms and institutions of reproducing tentative socio-spatial patterns.

When dealing with pivotal questions concerning the far-reaching degree of societal change, alliances, interaction networks, technology, material culture and economy around 2400–2350 BCE, migration processes are a necessary explanatory component. On the other hand it is hard to envision a large-scale migration (and in cultural historical terms, population replacement) on the Scandinavian Peninsula along thousands of kilometres of coast, into the inland and highlands. Migration is thus a necessary but not sufficient explanatory mechanism. In the case of Norway, a limited migration into southwest Norway is but one explanatory factor – sociology of knowledge, maritime technology, social competition, regional exchange, entrepreneurship and internal social tensions are probably also elements of relevance (Prescott & Walderhaug 1995; Prescott 2011).

Although we would need more high-resolution data and stringent model building for greater accuracy, a historical scenario may be outlined. The initial expansion of Bell Beaker societies in Jutland (Glob 1952; Vandkilde 2001; Prieto-Martínez 2008) led to a secondary BBC expansion into southwest Norway. Here, as in other regions of southern Scandinavia, these societies triggered the widespread establishment of Nordic LN societies. Concerning the Jutish developments, there is some discussion regarding continuity, external influence and local evolution out of the Single Grave culture (Vandkilde 2005; Prieto-Martínez 2008, 2009). In the case of southwestern Norway, there are no relevant precursors to developments in the LN, and the BBC connection is the only relevant explanatory lead. It is reasonable to assume that developments in southwest Norway were partly tied to a process of Bell Beaker migration from Jutland in the MNB3 ("Upper Grave phase"). The establishment of competitive and expansive BBC societies in southwestern Scandinavia led to the dissemination of knowledge and practices through developing western Norwegian networks. The rapid spread of the LN-type culture is probably also dependent on inner tensions, heightened by influences from the late MNB3/early LN I BBC societies otherwise established in northwestern Europe, structural traits in the BBC/LN I knowledge system that allow for expansive transmission instead of secretive coveting of knowledge (by analogy with Barth 1989), as well as direct expansive pressures generated by the first generation BBC society (discussed in sociological terms in Glørstad 2011). Concepts of kinship between groups in northern Europe were thus produced, creating the basis for a chain of alliances with a hub in northern Jutland (i.e. through coastal western Norway). It is reasonable to assume that these networks created paths of bilateral information flows, allowing for a continued process of migration, primarily based on marriage and travel. Eastern Norway, from Agder to the Swedish border, was conceivably also influenced by the historical developments in western Scandinavia, but marginally later and through an easterly route, from western Scandinavia through the Danish islands and southern Sweden. If this scenario is correct, the relatively homogeneous end product – the Nordic LN – was a result of variable processes.

Time depth

As Tables 12.1–12.4 indicate, societal transformation was rapid, affecting nearly a thousand kilometres of coastline around 2400–2350 BCE. However, what we observe archaeologically at this time is the outcome of a preceding process, as has also been argued for Jutland (Prieto-Martínez 2008). The time depth cannot be precisely determined, but there are perhaps some initial indications in the late MNB of what is to come in the LN (see Prescott 1996; Aksdal 2000: 118). The bell beaker from the Slettabø site (Skjølsvold 1977) is probably from the MNB3 or very early LN I, a date typologically supported by the barbed-and-tanged bifaces. Radiocarbon values (Skjølsvold 1977: 177) from the layer in which the vessel and bifaces were recovered generally support this conclusion, but can of course not delimit the chronology with further accuracy and confidence (Prescott 1996). Still, the Slettabø material provides the most telling direct data of the earliest BBC impact in western Norway (Prieto-Martínez 2008, 2009; Prescott & Melheim 2009; Østmo 2009).

In summary, there are some minor empirical indications, but strong logical arguments, that the agro-pastoral institutions were in the process of being established in the final fifty to sixty years of the MNB (Prescott 1996; Aksdal 2000; Olsen 2004), particularly in southwest Norway, in the MNB3. The evidence shows that the most accurate description is very rapid, momentous societal transformations around the MNB3–LN I transition, around 2400–2350 BCE.

From Neolithization to establishing the Bronze Age

Agriculture is commonly allotted a pivotal role in prehistory, either viewed as a factor with revolutionary impact in itself or a prerequisite for the establishment of institutions that represent a radical break with the past. In European prehistory the concept of a "transition to agriculture" is virtually symbiotic with the concept of "Neolithic", the process seen as that of "Neolithization". In the Norwegian case, wide-scale agriculture is unequivocally and rapidly introduced around, or as part of, the transition to the

LN. As such, it is a necessary part of an economic and cultural package introduced in association with BBC and Nordic LN influences. That said, it is probably not the most dynamic factor in the transition event. Technological factors of greater determinative importance are probably linked to a breakthrough in marine technology (Østmo 2008, 2011; Carrasco 2009) and the social institutions to support it (Kvalø 2007). The result is the institutionalizing of networks, maintenance of alliances and intensified exchange. The social bonds, the seafaring know-how and ship technology combined to allow predictable and regular crossing of open and challenging stretches of the sea – most importantly, between Jutland and southwest Norway.

As of the LN II (around 2000 BCE) the practice of metallurgy can with some confidence be demonstrated in Norway, but the evidence from Jutland and Norway point to metallurgy as a known technology (Melheim 2011) and an important socio-symbolic point of reference in the LN I (Prescott & Walderhaug 1995; Melheim 2011). The explanatory framework that emerges from the discussion above is that we are not dealing with a deeply seated evolutionary process of Neolithization, but a historical process that is part of the Bell Beaker horizon in northern Europe.

With the transition to the LN I there is not only a break with the heterogeneous traditions and social orders of the preceding Neolithic periods; a new trajectory with elements of continuity in the following two thousand years is also established. Though most structural changes that manifest themselves in the LN, BA and pre-Roman Iron Age otherwise in Scandinavia are also found in coastal and southerly Norway, perhaps as far north as southern Troms, there is also a fundamental structural and historical continuity from the LN I to the mid-pre-Roman Iron Age here as elsewhere in Scandinavia (Prescott 2005: 132–3). In this respect we can identify the historical roots of institutions that evolve around the LN transition and dominate history into the Iron Age, and indeed beyond. Though the social institutions continued to develop in the BA, for example leading to the establishment of relatively advanced chiefdoms, and though the networks of interactions move from a westerly Bell Beaker direction to an easterly continental and eastern Mediterranean focus in the LN II and EBA, the foundation for a BA society is established with the transition to the LN I. As such, the radical transformations around the transition to the LN I incorporate and are economically dependent on an agro-pastoral economy – but not on a process of Neolithization – in Neolithic Europe's geographical and chronological periphery. Instead, we are dealing with the incorporation into a Nordic cultural sphere, involvement in European networks, participation in Nordic alliances, establishment of farm institutions, and probably early metallurgy and a breakthrough in maritime technology, bound up with the expansion of Bell Beaker culture in Scandinavia. In short, the process described above is not the final blooming of the Neolithic, but the initiation of BA societies in Scandinavia.

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13

Social response or resistance to the introduction of metal? Western Norway at the edge of the "globalized world"

Nils Anfinset

Introduction

When compared with its Danish counterpart, it is well documented that the Bronze Age of northern Scandinavia is both minor and dissimilar, and a bleak contrast to the central European Bronze Age. Our understanding of the Bronze Age, particularly within Norway, has been made through reference to Denmark and the old discussion of cultural dualism (see Chapters 1 and 12). This chapter will therefore raise the question of what these assumed differences mean and express, as well as the reasons for these major differences. As western Norway was part of a centre–periphery relation (e.g. Kristiansen 1987a), could distance be part of the problem, or could there also be other large-scale social and economic reasons for the relatively late introduction of metal into the region? How important was metal in the early phase, and how did the societies of western Norway respond to the changes resulting from its introduction? This chapter will analyse the Early Bronze Age (EBA) of western Norway from a socio-economic viewpoint associated with the large-scale changes in central Europe and how this affected western Norway. Based on this it will be apparent that western Norway differs in a number of ways from other regions in northern Europe, such as central and southern Sweden, the northern part of Scandinavia, Finland and Denmark.

The time frame considered will be the EBA (c. 1700–1100 BCE in particular), but the Late Neolithic (LN) is also relevant (see Figure 13.1). Vandkilde's framework (Vandkilde *et al.* 1995), which is based on the extensive correlation of radiocarbon

Table 13.1 Periods and chronologies used in Chapter 13 (based on Olsen 1992; Nærøy 2000; Vandkilde *et al*. 1995; Vandkilde 1996; Bergsvik 2002).

Period	Abbreviation	Date
Late Neolithic	LN	2350–1700 BCE
Early Bronze Age I	EBA I	1700–1500 BCE
Early Bronze Age II	EBA II	1500–1300 BCE
Early Bronze Age III	EBA III	1300–1100 BCE

dates from the LN and EBA in southern Scandinavia and offers a framework that could also relate regional and inter-regional chronologies, will be used in this analysis.

"Globalization" and resistance: coping with change

A Bronze Age world system?

For several decades, particularly after Wallerstein's initial publications in the 1970s (e.g. Wallerstein 1974), there has been increased interest in core–periphery relations in archaeology in general. The approach studies world historical systems connected to inter-societal interaction networks, in order to describe and explain social change (Chase-Dunn & Gills 2003). A number of applications and variations of this theory have been applied to archaeological contexts in Eurasian, European and Nordic perspectives. The essence of the argument is that there is a strong and active core area with a passive semi-periphery, surrounded by a periphery where raw materials and other sources are extracted to benefit the dominating core. The theory has been applied to various empires and states after 3000 BCE in particular (Frank & Gills 1993), although recent modified versions, such as the distance-parity model (Stein 1999), or zones and zonations (Sherratt 1999) have also been significant. Obviously, the world system theory has raised much discussion in a number of significant works (e.g. Rowlands *et al.* 1987; Kohl 1987; Bintliff 1991; Edens 1992; Sherratt 1993; Kristiansen and Rowlands 1998; Kardulias 1999; Denemark *et al.* 2000). Much discussion has centred on the possibilities connected to the application of a capitalistic model to pre-capitalistic societies. The significance here is that it is not one single system that develops, but several that overlap in time (Abu-Lughod 1989), and it would be more beneficial to refer to trans-regional systems. The implication is that while separate systems evolve and develop under different conditions, they also overlap. This is important when considering the development of the Bronze Age societies of the Near East and Europe, where there may be several different core areas throughout Europe. In such a system, Denmark would be a periphery to central Europe, but nonetheless, a core area in relation to large parts of the Nordic countries. Consequently, large areas of Norway were also clearly part of other systems that extended to the east and north.

What happens on the margins – resistance or acceptance?

This is inevitably a discussion of cultural change, but it is also connected to aspects of ideology and power. Within the perspective of a Bronze Age world system, it is necessary to consider how such a system works on the margins, particularly with regard to social change. This is a theoretical discussion well beyond the scope of this chapter, but it is worthwhile considering certain central elements here. As Bourdieu (1992: 97–108) has pointed out, the processes of change are found within all societies across time, and they must begin at the cultural and social capital of the society. Dodgshon (1998: 162, 200) has also argued that there are mechanisms of social resistance connected to changes in social structure, which may be considered to be a kind of delay, or in his terms *inertia*. These are the processes and factors that maintain the social structure of the society, or at least slow down the process of change. Now, this is not a discussion of cultural conservatism, but rather an attempt to understand change in a sociological and anthropological perspective with a focus on human activity and the social forces at play. The resistance, Dodgshon (1998) points out, is especially associated with cultural/symbolic and organizational features connected to the physical environment and, in particular, the organization of the society. Dodgshon (1998: 197) points out further that the peripheral areas are more likely to possess more "unused freedom" and are less oppressed by a system at large to ensure the continuity of a larger system. This means that societies with a greater relative distance from the core area are likely to be more flexible, although they may be regarded as more "traditional" in relation to a greater system (Chase-Dunn & Gills 2003). This indicates that the margins are not only flexible relative to the core areas, but that they also have the potential of hybridity, newness, divergence or becoming "in-between space" with a greater chance of developing niches (Bhabha 1994: 36). At a later stage, these areas may in fact become centres of innovation with rapid economic growth, as Ekholm (1980) has argued. The diversity of the periphery may in fact also function as a "cultural filter", where certain traits or features are accepted while others are not. Similarly, Mann (1986: 539) has argued in his analysis that the geographical margins of a society's socio-cultural change are emphasized, as it is less bounded by an established system both in terms of institutions, power structures and space. Dodgshon (1998) maintains that the margins are areas where new valuables and symbols can be forged from their opposition and interaction to dominant core areas, where these margins can foster change as areas of spatial resistance. In other words, as Mann (1986: 539) points out, the margins were instrumental in driving socio-cultural change. Consequently, this would mean that the core area is less flexible, as they put effort into consuming wealth and invested in enforcing the position of the core area (Dodgshon 1998: 183).

Concerning the Bronze Age, Nordenborg Myhre (2004) has studied landscape with grave monuments and rock art as a basis for her analysis. She argues that southwestern Norway was a meeting place or place where new objects and social systems were introduced. What may be considered here is the manner of discourse between the local and the larger inter-regional settings. In the EBA, trans-local phenomena exist in western Norway, which reveal information about local lives and the dimensions of large trans-regional processes at play in the cumulative impact on society. In this setting, objects, social systems and the landscape were all significant factors.

The significance of metal

The introduction of metal has often been considered a significant part of the urban revolution and is often connected to evolutionary views on societies and cultures. In the 1950s, Childe (1951, 1957) argued that craft and skill were so important that metalwork would only be possible with full-time specialists, which also established bonds beyond family and tribe. Similarly, several others have later argued that the utilization of metal would imply some sort of social organization beyond the family level, creating different social structures and changes (e.g. Gilman 1981; Renfrew 1986; Kristiansen 1987a; Earle 1991).

However, this is not necessarily a straightforward evolutionary development (Yoffee 1993), as we need to understand the socio-economic and cultural preconditions when new items or raw materials are introduced. This does not inevitably have anything to do with technological superiority, or the presentation of exotic goods. In his classic article, Sharp (1952) clearly describes how new steel axes were never used as the Europeans intended and the few practical effects they had on the Yir Yoront standard of living were negligible. Technologically, the steel axes were undoubtedly superior in terms of efficiency. However, they did not stimulate the economic possibility of increased production. These are significant points with relevance to western Norway, when considering the impact of the introduction of metal and the general argument that both agricultural activity and the presence of metals are seen as fundamental for increased production and economic surplus.

The Late Neolithic: the socio-economic context

During the latter part of the Middle Neolithic and the LN, a focus in western Norway shifted towards Denmark with the import of flint daggers (Lomborg 1973; Scheen 1979; Rasmussen 1990; Solberg 1994; Prescott & Walderhaug 1995; Apel 2001). The LN is considered to be a phase with substantial change in terms of cultural influence and economic development. Prescott and Walderhaug (1995) argue that this period is the first phase of the Indo-Europeanization of Norway, which first made its impact on the coast and the southern part of the country, as a result of changes in central Europe. They contend that this accelerated through the LN and EBA with the rise of new settlement patterns, the importation of flint daggers from Denmark, the development of an agro-pastoral production and the development of an expansive economy based on surplus production. According to them, this resulted in social differentiation and the development of a new type of society and ideology with a common European understanding based on power, weapons, social inequality and a centre-periphery interaction (see also Solberg 1994). The root of this is found in the European Bell Beaker culture (BBC), which also found its way to western Norway (Myhre 1979; Holberg 2000; see also Chapter 12 of this volume), although it evolved in a different form than elsewhere. In Denmark, Vandkilde (1989, 1993, 1996: 266–7) has suggested that the flint daggers are copies of Bell Beaker bronze daggers, which has been interpreted as a BBC impulse in western Norway (Prescott 1995; Prescott & Walderhaug 1995; Aksdal 1996; Kleiva 1996).

Nevertheless, it must be questioned if this was a cultural package that was introduced relatively quickly accompanying the BBC, or if this was a much longer and slower process. It is constructive to briefly consider LN agriculture, as it may be part of the key to understanding the socio-economic developments in both the LN and the succeeding EBA. The nature of agriculture during this period has been an issue of considerable debate since the early 1970s (e.g. Bakka & Kaland 1971; Kaland 1986; Prescott 1995, 1996, 2005; Høgestøl & Prøsch-Danielsen 2006; Hjelle *et al.* 2006). Soltvedt (2000) has asserted that there must have been an established agricultural economy in western Norway at the very end of the LN or the beginning of the Bronze Age, although agropastoralism probably gained a foothold by the Middle Neolithic B–LN transition, after a period of evolution since the Early Neolithic (Høgestøl & Prøsch-Danielsen 2006). Hjelle *et al.* (2006) have argued along similar lines on the basis of faunal, palaeobotanical and archaeological material. This seems to correlate with the study of Prøsch-Danielsen and Simonsen (2000), who have contended that a deforestation and heath establishment in the region had three pronounced clearance periods, where the last is dated to the LN–EBA transition. Although there seem to be socio-economic developments such as the development of two-aisled houses throughout these periods, it is unclear to what extent this affected the social organization as such. In addition, virtually no LN graves are known (Hinsch 1954; Solberg 2006). If we briefly look to Sweden, there has recently been documented a number of technological and social changes during the Bronze Age connected to agriculture and settlements (see Sjögren 2006; Skoglund 2008; Högberg 2009).

In western Norway the agrarian alternative is fairly limited compared with Denmark and the southern part of Sweden. On the other hand, activities connected to fishing and hunting, in addition to agriculture, may have been important for establishing an economy based on surplus in western Norway. Further, as Hjelle *et al.* (2006: 165) argue, cultivation and animal husbandry had the potential of larger economic growth compared with hunting and fishing. There is no doubt that the introduction of farming and herding had a profound impact on western Norway, as it did elsewhere in the world, because farming and herding of animals resulted in a greater degree of sedentarization and different settlement patterns than before. In a long-term perspective, it created new economic possibilities beyond hunting and gathering. On the other hand, these economies are fundamentally different in many ways, which include significant factors such as organization, seasonality and sharing within a larger group. This will be discussed further elsewhere, but the importance here is that farming may not have demanded immediate socio-economic changes, as it is dependent on the activation of economic surplus beyond the household economy.

Early metal outside Norway

Metal artefacts were introduced to late Mesolithic and Early Neolithic contexts in Denmark around 4000 BCE. These disappeared again, only to reappear around 3300 BCE (Klassen 2000). Similarly, there is just as early evidence in northern Fennoscandia (Halèn 1994; Huggert 1996), which will not be dealt with here. Weiler (1994: 36–7) connected the earliest metal finds in Sweden to a few Battle Axe graves from the Middle Neolithic, consisting of spirals and sheets of copper, in addition to a few stray finds of almost pure copper axes.

In Denmark, there is again a steady increase in metals from the LN I (see Figure 13.1), mainly copper flat axes and gold sheet ornaments (Vandkilde 1996). These are basically of western European BBC influence, but may have been produced locally, while a few are of central European origin. According to Vandkilde (1996: 305), the LN I represents a period when the limited social and practical role of metal artefacts belonged to the collective domain, although this view has recently been challenged (Artursson 2009). From LN II, metal objects become a prime signifier of wealth and status (Vandkilde 1996: 206–7), and Vandkilde (1996: 305) interprets this as the appearance of a social hierarchy, based on external relations and the control of metal within a group-oriented society. From EBA IA (1700–1600 BCE), the majority of objects are still single finds, a few hoards, and there is a slight increase in burials containing metals, and

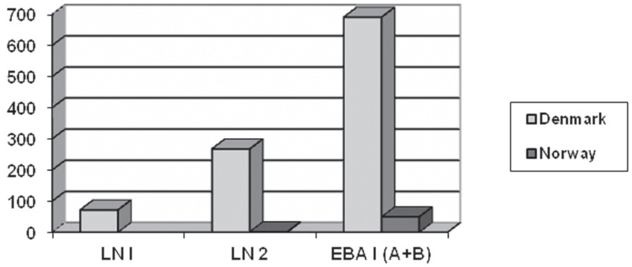

Figure 13.1 Comparison of metal from Denmark (based on Vandkilde 1996) and western Norway.

the variety of artefacts now increases (Vandkilde 1996: 222). During EBA IB (1600–1500 BCE), there is a massive upsurge of metal artefacts. Single finds still dominate, although there is an increase in burials with metals (Vandkilde 1996: figs 262, 263). Vandkilde (1996: 306) interprets this period as a change or break from the earlier social structure towards an individual society with an elite warrior ethos of high-ranking groups.

The significance here is that metal is introduced to Denmark twice and that the early finds are generally single finds. Further, the metal artefacts of the Early and Middle Neolithic seem to have been incorporated into ritual spheres in both Sweden and Denmark.

Early metal in western Norway

A number of researchers have discussed various topics connected to the EBA metals of western Norway (Solberg 1994; Aakvik 2000; Prescott & Walderhaug 1995; Aksdal 1996; Kleiva 1996; Prescott 1996; Østerdal 1999; see also Chapter 6, this volume). More recently, western Norway has also been discussed within a context of the possible production of copper during the Bronze Age and the influence of the BBC (Prescott 2000, 2005, 2006; see also Chapter 5, this volume).

Local production in the Late Neolithic and Early Bronze Age?

Recently, the potential of local bronze production in the Bronze Age has been argued (see Prescott 2006). In the Skrivarhellaren rock-shelter in Lærdal, in a mountainous region of western Norway, Prescott (1991: 78–9) found a small squared piece of bronze, a fragment connected to a LN layer, and two very small pieces of bronze in the EBA layer. There is evidence of heat treatment, but no slag, furnace, tuyers or moulds were present, which should rule out smelting. Although there are exploitable ores within the region, archaeological evidence connected to either smelting or casting from these periods is rather scarce. Yet casting would be possible in the rock-shelter as there is also evidence of a mould dated to period IV, which corresponds with other evidence found elsewhere in Norway, where local casting seems to start at the beginning of the Late Bronze Age. The point of interest here is that these pieces of worked copper and bronze found in the rock-shelter are connected to heat treatment. Further, these small pieces may indicate a great symbolic significance attributed to this new material well beyond the economic relevance, where the object was broken and possibly shared by a number of individuals.

Only one partial mould of soapstone (possibly of a sword) from western Norway may be tentatively dated to period II–III (Bakka 1973: 181), but the context is unknown and the evidence should be treated with care. There are two other known moulds outside the area of analysis, but the evidence is sparse and the moulds may also suggest secondary functions rather than the actual metal itself. The lack of evidence may have methodological problems, because it is acknowledged that moulds were made of both clay and soapstone (Weiler 1994; Skre 1998). Although more recent excavation results in Sweden at sites like Apalle (Ullén *et al.* 2003) have provided slightly earlier dates (period II) connected to workshops for casting it does not explain where and how the smelting was performed. Eriksson (2003) points out that although some casting may be dated to EBA, the overall majority stems from the Late Bronze Age (LBA). How then can the increasing number of bronzes through the EBA be explained and how were bronze items acquired and used?

Scale and distribution

In order to better understand the introduction of metal to western Norway, both the geographical distribution as well as its distribution over time will be considered (Figures 13.2 and 13.3). The term "hoard" used here signifies an intentional deposition of one or more artefacts into a specific archaeological context. There will be no attempt to emphasize the variation of the Bronze Age hoards, though during the period considered there is an emphasis on wet contexts, as well as those connected to rock, scree and mountains (Johansen 1988; Bårdseth 1998; Melheim 2006).

The geographic distribution of metals in western Norway has been noted by several authors (Bakka 1993; Solberg 1994; Chapter 6, this volume), and Rogaland, in particular, is well represented (see Figure 13.2). This difference has traditionally been explained by the location of Rogaland – due to its being well suited for agriculture and economic surplus and in close proximity to Denmark. Gaustad (1965) has, among others, pointed out that there is quantitatively few bronzes in this part of Norway compared with Denmark. With Vandkilde's study (1996), the difference is even more pronounced (see Figure 13.2), although there seems to be an indication of the use of metal already in the LN.

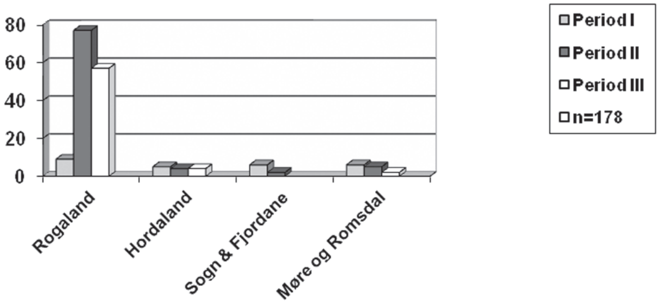

Figure 13.2 Geographic and periodic distribution of Early Bronze Age bronzes in western Norway.

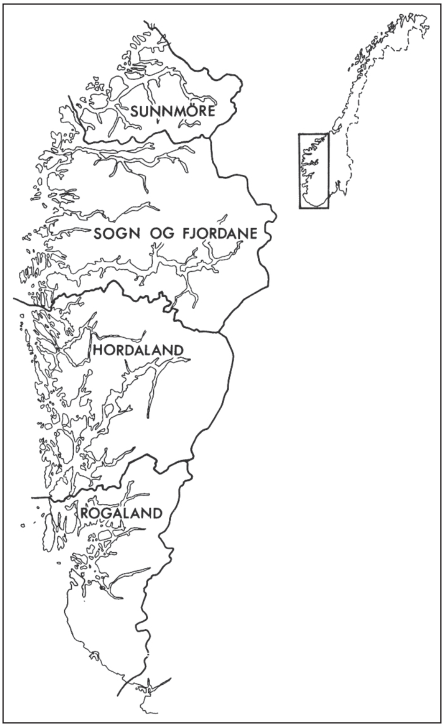

Figure 13.3 Map of the geographic area (from Solberg 1994).

Late Neolithic Axes?

One of the earliest axes in western Norway is probably from Bersagel in Rogaland and was found in a cairn. Aakvik (2000: 20) places the axe within Vankilde's Store Heddinge type (Vandkilde 1996: 90, fig. 75.H), which dates it to the LN. Another axe has been found in eastern Norway, and is classified as a flanged axe A2 or A3, based on Vandkilde (1996), which would thereby date it to LN II (Groseth 2001: 36, app. 4). Groseth (2001: 37, fig. 14) interprets the deposition of the axe as ritual, which corresponds well to Vandkilde's interpretation in Denmark. These two axes are probably the earliest metal artefacts known in southern Norway in general, although it is difficult to draw any comprehensive interpretation or conclusion. However, both the scale, as compared with Denmark, and the depositional contexts of the two are noteworthy.

Period I (1700–1500 BCE)

From period I, the artefacts consist mainly of axes, in addition to a sword, a dagger and a bracelet. These may be interpreted as belonging to the "male sphere", while the bracelet may be connected to the "female sphere". However, when separated into contextual relations, the picture indicates a different view as seen below. Further, on a comparative level, the scale is not that different from eastern Norway with twenty-three artefacts from period I (Johansen 1981). In other words, there is not a significant difference in the number of early bronzes dated to period I between western and eastern Norway.

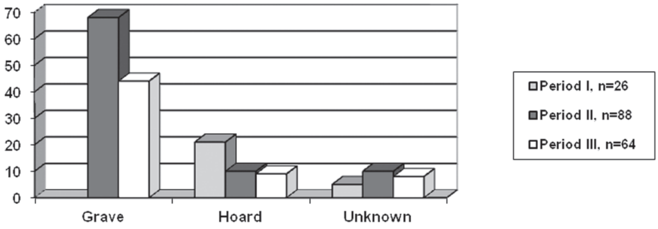

Figure 13.4 Context of bronzes from periods I–III.

As the axe from Bersagel has been placed in the LN, and twenty-one artefacts are found in hoard contexts (see Figure 13.4), five artefacts from unknown contexts remain. The majority of the flanged axes are found in Rogaland, but six axes are also found outside this area, which is worth noting. The first notable aspect is the geographical distribution of these six axes, as two are found in Sunnmøre, in an exceptionally rich area at that time, although this area was not prominent for its agriculture but rather its fisheries. Further, the remainder of the axes were all found quite far into the fjords, in Sogndal, Stryn and Aurland. Although only one dagger is dated to period I, this also falls into the same pattern as the axes. In addition, it should be noted that most of the hoards in EBA in western Norway are generally single-artefact hoards. Veim is exceptional as it consists of two axes and a bracelet. One of these axes is partly broken, which is not an unknown phenomenon among the LN daggers, as pointed out by Holberg (2000). A similar pattern is also found in hoards in Denmark (Vandkilde 1988: 127) and in southwestern Sweden, where one-third of the axes in one county had been broken (Weiler 1994: 44). Looking beyond northern Europe, this has been noted by Chapman (2000) in early metal phases on the Balkans.

Period II (1500–1300 BCE)

In period II, the types of artefact change. While the main artefact in period I was the axe or adze, in period II there is a greater variety, with emphasis on "female" artefacts, such as tutuli, neck rings, bracelets and fibulas. This latter group accounts for almost half of the bronze artefacts. Furthermore, the number of bronzes increases by more than three times, which must be regarded as significant. It is striking that there is a drop in number of some artefacts, especially axes, while the number of swords and daggers increases.

In addition, there is a change in the depositional context from period I to period II, as there is now a greater emphasis on burial contexts. The majority of the bronzes are now found in burials (77%), although there are still some deposited in hoarding contexts, in addition to a few in unknown contexts. Nevertheless, the tendency seems clear when compared with the previous period.

Period III (1300–1100 BCE)

In period III, the repertoire is less, but there is also greater emphasis on "male artefacts", such as axes, swords, daggers and possibly knives. In contrast, the actual number of bronzes throughout the region decreases when compared with the previous period.

Comparing graves from EBA I to EBA II and III, the tendency to hoard does not indicate uniformity towards consolidation of the elites, because the EBA I artefacts are found in almost equal numbers outside Rogaland. In some measure, these must be understood within a different hoarding and cultural frame during EBA I, with less emphasis on wealth, power and political economy, and they must be seen in a context where social differences are levelled out. In her analysis of the hoarding praxis during LN and EBA, Bårdseth (1998: 93) has argued that there is both a collective and individual pattern, although the collective pattern seems to be the most apparent. This would imply that once the bronzes were introduced, they were introduced into an already existing pattern of hoarding. However, it is especially in periods II and III that the distinction develops and this must be understood as part of a larger process of change.

The impact of metal

Metal and power

As already pointed out, in the beginning, metal and metallurgy are often connected to complex societies with a hierarchical structure, where our ideas of progress are often combined with technological progress and evolutionary thinking. Generally, wealth is associated with the elite, and in these cases, wealth is signified particularly by the possession of bronzes. Small-scale societies are, on the other hand, generally associated with subsistence goods, and in this way the diversity of socially valued goods is lacking, notably those that may be embedded in social roles and ceremonial obligations (Douglas 1958). This is central as a means of maintaining power with goods from distant places.

The question is essentially whether metal and metallurgy were integrated into existing forms of social organization, or whether metal created new forms of social organization in which it was used as a medium for expressing wealth and power relations (cf. Kristiansen 1987a). Vandkilde (2007: 41–43) argues that it is difficult to find metal-using societies which maintain an egalitarian way of life, due to the differential and limited access to and control over key resources and exchange networks, as well as the fact that metallurgy demands craft specialization beyond the household. On the contrary, the first phase may be seen when metals are introduced as a more corporate strategy (e.g. Blanton *et al.* 1996), where there is greater emphasis on communal and collective ideas as ways of coping with these changes. In Sweden, Weiler (1994: 53) has argued that there were social and ideological factors connected to the introduction of metal, but not with the metal itself.

In addition, copper and bronze have the properties of being shiny (H. Morphy, quoted in Spielmann 2002), creating colour and sound (Hosler 1995), and unfinished objects may be regarded as socially valued goods used in ritual contexts (Herbert 1984, 1993; Mauss [1950] 1990; Anfinset 2011). This might to a large degree explain why bronzes in the first phase of introduction are being found in hoarding contexts. Over time, these artefacts were sought after in the exchange of social values and creating networks and hierarchies. Furthermore, the actual introduction of new artefacts or materials may have relevance well beyond the economic sphere, as they could be broken and shared by a number of individuals (see Darwin [1845] 2001; Mauss [1950]

1990), as we see from several of the early bronzes in western Norway. It appears as if metal was not significant in the expression of wealth and status, but rather incorporated into a Neolithic hoarding practice. Metal seems to be incorporated into existing social and cultural frames, while the social and technological transition comes later. The real change occurs during period II when the elite was established, as there was now the possibility to deposit larger amounts of metal in graves due to increased economic surplus, particularly in areas of good, fertile land with strategic locations towards Denmark.

Distance and place

Distance and travel have been of great interest over the last decades within Bronze Age studies but also generally in studies that emphasize the power of geographic distance, the ideological importance of exotic goods and the social lives of artefacts in different ways (Appadurai 1986; Helms 1988, 1993; Barrett 1998; Bradley 2000; Kristiansen & Larsson 2005). This also raises the question of whether local ores were used. Although local ores could well have been known (see Chapter 5), as in the case of Skrivarhelleren in Lærdal, the ideological importance of distant places would be significant. This would not only emphasize distance, but also the *place*. This is a phenomenon recognized from earlier as well as later periods, as, for example, by the archaeo-metallurgical analysis of LBA bronzes from Sardinia. Here the copper resources derive from Cyprus, although Sardinia has its own copper ores (Stos-Gale *et al.* 1997), thereby emphasizing the place of origin. In this case, these were personal items and part of a larger economic system within the Mediterranean world. Moreover, this might explain why the earliest casting evidence in Norway is dated to the late EBA and the beginning of the LBA (Prescott 2000; Anfinset 2006). Slightly earlier material connected to casting is now known in Sweden and Denmark, and may point towards regional differences in the adaptation of new knowledge and technology. What is seen is an emphasis in the first phase towards exotic goods from distant and unknown places that were shared within the community, while in the second phase, knowledge or know-how of casting became significant. This made it possible to develop local styles and to a much greater extent control the production.

For western Norway, early bronze artefacts did not only find their way into the rather remote inner reaches of the fjords, but they were also incorporated into existing social and economic structures. Aakvik (2000: 72; see also Chapter 6, this volume) argues that early bronzes in Hordaland, Sogn and Møre all belong to the Aunjetiz culture and indicate an exchange pattern with eastern Norway, rather than through coastal relations, as earlier believed. However, this pattern probably changed in period II when elites along the coast developed, emphasizing the lines of communication on the coast, as expressed through rock art boats (Vevatne 1996: 117). As Weiler (1994: 53) has argued for Sweden, contacts overland are different from contacts over water, and the central Vestergötaland should be treated differently from those groups who lived along the coast. Nevertheless, in western Norway, early bronzes were deposited at the base of mountains, large rocks, screes and several of the artefacts were found in what we may interpret as secluded and enclosed contexts, from a geographical point of view. Again this recalls Sharp's (1952) classic study article, which suggests that metal, once introduced, did not improve the conditions of the people, but changed the social organization and economic structure of the society in the long run. Significant for western Norway was the hoarding practice, which had long and deep roots well beyond the economic sphere. In this way, LN/EBA I societies were socially and culturally flexible. The long and varied adaptation to the environment and its resources along the coast of western Norway made it necessary to share and distribute surplus in a different manner than among the more intensive and specialized agricultural societies of Denmark, southern Sweden and those further to the south.

At the “edge” of the globalized world

There is not only a late and minor introduction of metal into western Norway. There also seems to be a similar pattern with reference to metallurgy, as well as in the later technological know-how of casting. This cannot be explained solely from a technological point of view, because of the argument for economic emphasis in LN–EBA societies, with the production of pastoral and agricultural products. In this context, metal artefacts were introduced and transformed in an agricultural and fishing–hunting context. However, both agriculture and metal were slowly introduced and modified into the existing social organization and belief systems, functioning as cultural filter, while in the long run, the changes were fundamental and certainly led to new cultural and ideological structures that would shape the societies in the millennia to come. Kristiansen & Larsson (2005) have, to a large degree, explored this, arguing for an understanding of the complexity of prehistoric interaction, where long-distance connections influenced local elites in terms of religion, economy, politics and social organization. Western Norway was part of an overlapping world, with impulses from the various places, though gradually impulses and relations to the south developed and were strengthened in LN and EBA. Comparing this with Jutland, Earle *et al.* (1998) have argued that the LN was based on a self-sufficient household economy, and it is unclear if any chiefs or hierarchies existed at all. There seems to be an increase in animal husbandry, particularly cattle, in social ranking and in a process towards a political economy, as seen by the increase in large barrows during the EBA. Within this picture, major changes would come after 1900 BCE, and would manifest in a significant socio-economic break or shift. This has recently been challenged by several Swedish scholars (Apel 2001; Lekberg 2002; Artursson 2009), who argue for an unequal distribution of wealth and power based on settlement patterns, flint daggers and stone axes.

However, as Høgestøl and Prøsch-Danielsen (2006: 31) argue for western Norway, there was no need, culturally or economically, to adopt an agro-pastoral production. Obviously, agriculture was no prerequisite for the introduction of metal to western Norway, but its establishment and the succeeding socio-cultural changes made it “necessary” in the long run. Agriculture and animal husbandry does not necessarily produce a large aggressive surplus. How the surplus was spent was also dependent on ideological and social conditions, and, in this case, western Norway had a long hunter–gatherer tradition, which strongly limited the expansion of agriculture, in addition to obvious climatic and ecological reasons.

Metal artefacts were increasingly incorporated into the repertoire of artefacts throughout the EBA. The development and diffusion of metal and metallurgy is not a straight linear event, but a series of connected social boundaries, or “barriers” and spheres of interaction. The long-lasting tradition of using stone axes may further support the transition (Østmo 1978; Marstrander 1983; Weiler 1994). Interestingly, the Bronze Age system that had developed in large parts of Europe met a different system on the periphery, a system based on contrasting values, exchange modes and ideas. This was not revolutionary at the time, but for the region discussed here, it was revolutionary in a long-term perspective. It is likely that different economies met and overlapped (e.g. a gift economy based on household production and an economy based on commodities and exchange). In the periods discussed here, social systems with dissimilar subgroups, sections and communities were not uniformly integrated into the Bronze Age economy, although some developed tighter contact with certain areas, such as that between Denmark and Rogaland. In these areas, it was more important to keep and adjust norms according to the values of the south, rather than the areas further to the north along the coast of western Norway. In other words, once a system of relations based on ideology and economy was established, it developed into a core area, and remained "conservative" in order to keep its ideology and wealth. Meanwhile, the peripheral areas along the coast were more dynamic, with parts of the society supporting the core area (elite in the periphery), while the rest kept values, norms, beliefs, symbols and forms of social organization, using this as a basis for identity. This created greater diversity and hybridity along the coast of western Norway, as society was more flexible to change, while the core area, such as Rogaland, had less diversity and greater interest in keeping and maintaining the *status quo* (Dodgshon 1998: 188). This would also be in accordance with the argument of Nordenborg Myhre (2004: 21), who sees Rogaland (southwestern Norway) as an area of transformation between the traditions of north and south.

If a world system perspective is used on the Bronze Age, it is subject to constant shifts and remapping, both with internal and external factors. This also agrees with Rowlands's (1987: 10) argument of regular or cyclical shifts within core areas. Additionally, Dodgshon (1998: 83) sees this as a "situatedness" of particular societies and possibilities for changes and adjustments. Following the argument of Ekholm (1980) and others, it is evident that Scandinavia develops an innovative centre of rapid economic development in the late EBA. Here, a specific local Nordic tradition develops on the basis of earlier connections, as seen in the spiral-style. New centres of innovation develop in former peripheries, both in Denmark and more regionally in Rogaland and Sunnmøre. This is why a more flexible and dynamic society is seen in the transition to the Late Bronze Age, which picks up on the Bronze Age ideology, but also develops its own distinctive traits to a greater extent. In this way, there are long waves of globalization and resistance that affect western Norway, and provide a greater understanding of what happens in the margins of such large-scale processes. This would also be in accordance with Weiler (1994), who argues that the innovative LN environments created a shift from communal thinking, towards a focus on the individual. In the same manner, Kristiansen, among others, has argued that a new social pattern, based particularly on bronze artefacts and technology, was established in southern Scandinavia by the third millennium BCE. According to Kristiansen (1987b), this resulted in new social hierarchies in the second millennia, which were based on control of the bronze stemming from central Europe.

That is to say, there were several systems with different core areas connected to inter-societal interaction networks of which western Norway was a part. The region played a dynamic and flexible role on the periphery in that it was not obliged to ensure the continuity of the larger system, as would have been the case in Denmark. In western Norway, there were mechanisms of social resistance associated with social change, or mechanisms of delay that were associated with the cultural and symbolic organization of the society, as well as the physical environment. This is seen in the slow introduction of metal and metallurgy, in addition to the hoarding practices in Sunnmøre (cf. Bårdseth 1998: fig. 4, tables 4 and 5), where the LN–EBA period has the highest number of artefacts and the most variation. This may be interpreted as a difference to which there is resistance in period I, which develops into acceptance in period II, as a response to the growing internationalization and globalization of the Bronze Age economy. At first, this is seen in graves, which contain fairly equal deposits of male and female artefacts, but a change occurs in period III as a further adjustment and response to the globalization process. In other words, western Norway may, at this point, be considered a periphery if regarded from the south. However, considered from the north, there are dynamic processes that take place. Western Norway is not just a passive recipient of metal in a long chain of artefact exchange with the introduction of new cultural ideas, but these are incorporated locally, making a distinct regional expression in its adjustment to larger economic and social forces. In this manner, new valuables and symbols were forged in opposition to and interaction with dominant core areas. The resistance and slowness seen in the development of Bronze Age societies in western Norway were also associated with the physical environment and the organization of the society, particularly with respect to the role of agriculture and animal husbandry.

Concluding remarks

To conclude, this chapter has, to a large extent, focused on metal, especially bronze, although this is only part of the story. These artefacts were incorporated into both an existing Stone Age technology and an agricultural society, based on farming, animal husbandry and fishing. Furthermore, the LN and EBA witnessed a number of social environments adapting differently, depending upon the local setting. Therefore, at an "early stage" in the process of introduction of metal to western Norway, a number of artefacts may be found showing distant connections, such as the Veim axes and bracelet, and the Blindheim sword. This may also be seen in the depositional context, which clearly emphasizes the ritual hoarding of these "new artefacts". This situation changes in period II with a greater scale of artefacts and categories, as well as greater emphasis on grave contexts in period III. Towards the end of period III and later, there are significant changes where local casting of bronze artefacts also takes place.

There was no tradition of metal or of a political economy, as these were introduced in the middle part of the EBA. However, long-standing contact with Denmark and central Europe from the LN period onwards supported this process. On a larger scale, the first phase may be regarded as a social resistance to the growing impact of Bronze Age societies and economies in the south, which had a different material basis as well as a dissimilar social and economic organization. This may, at first sight, be interpreted as a contradiction, as there are apparent differences in the conditions in western Norway and Denmark, which resulted in contrasting ways of living with a different social organization. Yet this also enabled people to cooperate beyond dissimilarities, exchanging goods and necessities, as well as luxuries.

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